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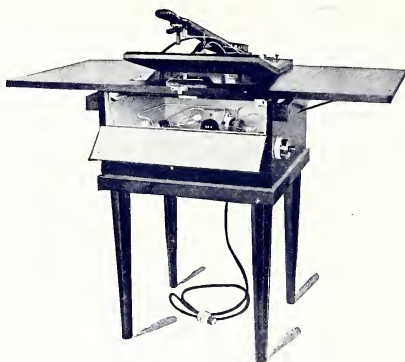
PHOTO-ERA

The American Journal of Photography



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INDIAN PIPES
DR. J. B. PARDOE



PHOTO-ERA

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The Mystery of the Quartz-Lens

KENNETH HARTLEY



THE interesting account, in April PHOTO-ERA, of some experiments with a quartz-lens, has undoubtedly raised the question in many minds as to *how* a material other than glass in a lens can increase the photographic power of the light so tremendously as to reduce the exposure to less than one-half of that required with the usual type of lens. This greater speed of the quartz-lens is an unquestionable fact; for, although it is a new instrument to the photographer, it is quite familiar to the scientist, and its properties are thoroughly understood. Of course, no lens can *increase* the power of the light; but the glass-lens can and does greatly reduce it, and the only way that we can fully realize this is to make a comparison between glass and quartz in some such way as was done by Dr. Kilmer. It must be remembered, however, that the difference between a glass-lens and a quartz-lens is not at all the same kind of a difference as that between a slow lens and a fast lens of the same material; and, to understand the reason for this difference between glass and quartz, and how it will affect the manner of using the lens, it is necessary to know something of the nature of light and what may happen to it when it passes through a transparent substance.

Everyone knows, in these days of "general science" classes in the schools, that white light is a mixture of all the colors and that, if white light is passed through a glass-prism, the colors will be separated, and will produce a band of colors on the screen like a narrow slice from a rainbow. This band of colors is called the spectrum and, by observing it through an instrument called a spectroscope, it is possible to make a much more exact comparison of the light from different sources than by any other means. The first thing that was discovered with the spectroscope was that, although the light from

the sun gave a continuous band of colors—with all the delicate blendings of the rainbow—the light from flames and other artificial sources was usually not continuous, but produced a series of bright lines with dark spaces between, and that the spacing and arrangement of these lines was characteristic of the substance that was vaporized in the flame. Some things, like the alkali metals, give only two or three very bright lines, but other things, like iron or aluminum when vaporized in the electric arc, give a very large number of lines—some strong and some faint—scattered through the whole range of the spectrum. When the invention of photography made it possible to obtain a permanent record of these complex spectra for further study, scientists were quick to recognize the advantage and an instrument was devised, called the spectrograph, in which the spectrum is focused on a photographic plate and an exposure made as with a camera. When these plates were developed, they showed that the spectrum extended far beyond the last violet-lines that were visible to the eye, and we know now that we are able to see only a small fraction of the rays of energy that we call light.

It has been proved beyond question that light is a sort of vibration, and that it resembles in some respects the waves that are produced in still water when a stone is thrown into it. The waves produced by a big stone are larger than those produced by a tiny pebble—not only in height but in the distance from the crest of one wave to the crest of the next one. This distance is called the "wave-length" and is the measurement which determines the characteristic qualities of all forms of radiant energy, sound, light, radiant heat, X-rays and the electromagnetic waves that carry wireless-messages. The pitch of a note in music depends on the wave-length of the sound-wave. The color-sensation produced by a ray of light depends on the wave-

length of the light-wave; and it is possible, by means of the delicate instruments and refined methods of the modern physics-laboratory, to measure the wave-length of the light which produces each of these bright lines in the spectrum.

The longest wave-length that can be seen produces the color-sensation of dark red, the shortest wave-length appears as a faint violet.

red light can get through the glass; it is opaque to the other colors. The glass has no power to change the other colors into red; it simply stops or absorbs the other colors as any opaque object would. If we look through a blue glass, everything looks blue; for the glass absorbs all the red, yellow and green light, and only the blue can get through. Now, we think of ordinary glass as being perfectly transparent because it



Figure 1



Figure 2



Figure 3



Figure 4

In between are all the colors that we know; and, then, on beyond the violet are the "ultra-violet" rays of still shorter wave-length which are invisible but can affect a photographic plate. Beyond these are still shorter waves that do not affect an ordinary plate but can be detected by a specially prepared plate or by other methods.

If we look at a landscape through a red glass everything looks red, or black, because only the

transmits freely all the light that we can see; it also transmits the ultra-violet light down to a wave-length about seven-eighths of the wave-length of the shortest visible violet-rays. For a long time, this was supposed to be the end of the spectrum; but then some investigator tried to make the prism and lenses of a spectrograph out of quartz instead of glass, and it was found that the spectrum continued far beyond the

last lines ever photographed with a glass-instrument. The shortest waves transmitted by the quartz-lens are less than one-half the wave-length of the last visible violet-light. Quartz, therefore, is much more transparent to these invisible rays than is glass, and the speed of the quartz-lens is thus accounted for easily by the fact that it will transmit all the rays that can affect a photographic plate.

It is difficult to realize all that these things mean, unless one has done some work with a spectrograph; but perhaps the accompanying illustrations will help. Figure 1 is a small part of the spectrum of an electric arc formed between electrodes of iron instead of carbon. This was photographed with a very large quartz-spectrograph in which the total length of the spectrum was nearly thirty-six inches. It was therefore photographed in four sections on ten-inch plates. The first plate covered the entire visible spectrum; the second plate, of which this is a part, overlapped a little on the field of the first one so that the three bright lines at the left of the illustration were the last three lines that I was able to see. They were a faint violet-color, and beyond them nothing was visible. The numbers opposite certain lines are the wave-lengths of the light that produced the lines, expressed in Angstrom units. Figure 2 is a part of the third plate, showing that the photographic power of the rays still continues. Figure 3 is a part of the fourth plate showing the limit of the sensitiveness of a gelatine dryplate at about wave-length 2,100 Angstrom units. The spectrum continues on indefinitely, but can only be detected by other methods. Figure 4 shows the extreme end of the spectrum obtainable with glass prisms and lenses; this was made with one of the largest spectrographs in the country and is on a larger scale than the other; but the lines can be identified easily with the corresponding lines in figure 1 by comparing the numbers.

The ordinary plate is not sensitive to the longer wave-lengths—beyond 5,000 Angstrom units—so that the limit of the transparency of glass is just about half way between these limits of the sensitiveness of the plate.

Now, what does all this mean to the photographer? In the first place, it is possible to make a photograph with a quartz-lens with approximately one-half the exposure that would be required with a glass-lens of the same aperture *provided* that we want a photograph made chiefly with the ultra-violet light. When we remember that the chief reason that photographs made without a ray-filter often misrepresent the subject is simply the fact that the plates

are too sensitive to the blue and violet-light in comparison to the other colors, it is evident that with a greater amount of ultra-violet light admitted to the plate this misrepresentation will be increased. It will occur undoubtedly to some one that the quartz-lens will make it possible to make snapshots with a ray-filter or to shorten the exposure for autochromes, but this is not true; for as soon as a ray-filter of any kind is placed over the lens its peculiar advantage is completely destroyed. The first requirement of a good ray-filter is that it shall shut out all of the ultra-violet light, and it is just this kind of light—and this only—that makes the quartz-lens faster than glass.

For very high-speed work and for exposures in a very poor light, the quartz-lens would give the photographer a decided advantage; but in speed-work sharpness is usually desired and the quartz-lens is necessarily a soft-focus lens and this quality can never be overcome. The diffusion will be of the same character as that of a semi-achromatic lens, for it is due to the fact that the different colors do not come to a focus at the same distance, and there is no way to make it achromatic except by combining it with a glass-lens which would destroy its peculiar property. In the spectrograph, the red-rays come to a focus considerably farther from the lens than the blue-rays; but they are at opposite ends of the plate so that by setting the plate at an angle, sharpness can be obtained at both ends.

For enlarging or any work in which the question of color does not enter, the particular quality of the diffusion may be very desirable, and both the amount and character of the diffusion may be altered by the use of ray-filters of different colors. A curious experiment is to coat one side of the lens with a thin deposit of metallic silver—by chemical deposition—and make a photograph by the ultra-violet rays only; the silver will shut off all the visible light, but let the ultra-violet rays through.

It is evident that the quartz-lens—like many other high-grade instruments—has only a narrow field of usefulness and just what this field may be, remains to be seen.



ONE hears often of a transcript of Nature. But while the term may be interpreted in more ways than one, let us remember that Nature in all her inspiring beauty is awaiting the call of the painter, the photographer and the autochromist. A good color-transparency is a joy.

In Nature's Studio

DR. J. B. PARDOE



Y friends sometimes call me a naturalist, because I love to wander about in the woods, instead of taking up the golf-club, the tennis-racket or the emblem of some other form of exercise and recreation. I much prefer, and enjoy a great deal more, to take my favorite camera, and visit Nature's Studio. Here in the fields along the brook, or in the woods, we have subjects to photograph, study and admire—seemingly without end.

It has been said, "There are tongues in trees, books in brooks, sermons in stones, and good in everything." Take the advice of a nature-lover. Leave the city and go to the garden of nature—the big outdoors is calling you. Quietly enter nature's realm, take a seat upon a fallen tree-trunk, and listen to the trees; or lean against a mighty rock, and try to read some of the sermons therein; or spend the day along the brook enjoying the many secrets which will be revealed to you.

So many things are waiting to be photographed in nature's storehouse. One may find here a great variety of subjects. There are so many. I will say like the Indian that visited England. Coming home, he was asked by his people how many people he saw? His reply was, "They are like the leaves on the trees, like the sands on the sea-shore."

You may photograph a little of all, or specialize in the subject that you like the most. A series of studies of the wild-flowers of your neighborhood will afford great pleasure to a flower-lover and his friends. Bird-life offers many opportunities for study, if you like birds best of nature's subjects. Try to portray bird-life, from the building of the nest to the leaving of the young birds from these home-trees.

Going to nature with the camera, one learns to see and to appreciate things that were never before noticed. The camera is the one great teacher of the beauties of nature.

Taking a long walk in the country, to photograph a certain view, one passes thousands of interesting subjects. A stop is made to rest. Begin to look around you carefully, and new beauties will be revealed to you; things you never thought of before are at your very feet. It may be a few ants at work, a rare fungus growing from the old stump, a beautifully marked lizard under the log-bark upon which you are sitting; or an exquisite flower pushing up between the leaves. Look under the stone, a

friendly little ribbon-snake may be waiting here to pose for you. Part the bushes near you and, perhaps, you will be rewarded by the sight of a happy bird-home. The little birds will stick up their heads and say, "Take our picture, mister." Over your head may be some pretty buds or blossoms, or a few cocoons with a beautiful moth about to be born again. Perhaps a rabbit is sitting quietly and closely in a tuft of grass, with only his head showing; or a squirrel may be hiding in a limb over you. The lichen-covered tree-trunk may prove a very artistic bit. Scraping your foot along the soft, woody soil, you may unearth the toad. A little further search may reward you by finding a turtle making a meal of a toadstool, or, perhaps, wild strawberries, of which it is very fond. Look on that bright spot on that rock, a jeweled beetle may be sunning itself there, or a big, yellow beetle may be in the soft decayed wood of the log. Try your luck on the fluttering butterfly, or the bumble-bee. This will test your skill. These are just a few things to interest you in nature-study, and by carefully observing the little things close at hand, many new fields of endeavor will be opened unto you.

When one makes up his mind to venture on a nature-walk, with his favorite camera and other paraphernalia pertaining thereto, it makes the trip more of a success, and helps a great deal, to have the good fortune to have a frau, help-mate, dear, squaw, or whatever you call her, along with you. In my case, I call her Jill; she calls me Jack. We often go up the hill together, in all kinds of weather, not to fetch a pail of water, as the story goes, but perchance to find water in a bubbling spring—so cold, that it seems as if our hands would freeze, if kept in the water too long; and what nature-lover does not look back with fond memories to one or more of these cold springs? How much better this water tastes, and how satisfying it is, after a long tramp up the hillside. Especially, if your companion has carried in her knapsack, what she calls, a little luncheon. How refreshing it all is!

After your interest in nature-photography has been thoroughly aroused, you will not come home and say, "I did not expose a single plate"; but you will say, "How I wish I had brought along more plates." Many inducements are offered to the nature-loving photographers.

It was up a wooded hillside of the Watchung Mountains, near Somerville, New Jersey, the top of which is at an elevation of about six hundred feet. We discovered a broken stump

of a tree about six feet high, with an old hole of the Golden-Winged Woodpecker. As a boy, I knew them only as Flickers or High Holders; but since reading Chapman's *Birds of Eastern North America*, I discovered the High Holder of my boyhood-days was a real Woodpecker with golden wings. Many a time, as a boy, I have stood in our old apple-orchard, watching these carpenter-birds hollow out their homes, in the decayed apple-tree stumps. I would often sit by the hour, beneath one of the work-shops, marveling at the efficiency of their bill-thrusts in cutting out little chips of wood. I remember gathering a handful of these chips to save and exhibit, in studying the life of this bird.

Some years ago, in going along a country-road, near my home, I found the nest of the Golden-Winged Woodpecker with young birds. As it was exposed to the many travelers and boys which frequented this thoroughfare, at the edge of town, I thought I would try the experiment of moving the whole stump, with its precious contents, to a safer place in my back-yard, which was about one hundred yards away. Sawing off the stump near the ground, I moved it twenty-five yards and tied it to a tree, watching to see if the mother-bird discovered it, which she did, apparently without any trouble, and continued to feed the young birds as usual. Moving it another twenty-five yards, the next day, I noticed that the mother-bird continued to follow the home-moving. The next and final move, I made direct to my yard and tied it securely to a stake driven in the ground. Having some fears, the mother would not come to this last home-site I watched carefully for her return, and in case she did not come, or was unable to find it, I was ready to carry it back again to its first location. But my fears were not necessary, as it was only a short time before she came to her home-stump. Here the birds were reared in safety, in full view of the neighborhood. The old birds became very tame, feeding their young before many an audience.

One day a prowling, hunting, fiendish cat made her appearance on the scene. The old bird made such a loud call of distress, it really seemed that it could be heard for half a mile, frantically trying to protect her young by darting from tree to tree before the cat. I promptly came to the rescue with a loose lima-bean pole. Quiet restored, the feeding of the babies went on as usual. The mother Flicker did not seem to have any fear of dogs. Right here I might say that I have seen more damage done by stray cats to song and insectivorous birds, man's greatest friends, than any other agency of destruction that I know of. Bills for the licensing of cats

have been introduced in some states, and I think this a very good thing. I am glad to report that the young Flickers reached maturity and left the old home to shift for themselves.

On this same mountain hillside we found another interesting stump, and to my ever-present companion I said, "I bet there is something in that hole. Do you see that shred of cedar-bark hanging from the entrance? I am sure it's a squirrel, as they often strip the outer bark from cedar-trees, with which to line their nests." To the ardent nature-cameras, who is eager to photograph the wild creatures of the woodland, fields and streams, let me say, "Play safe; be alert"; or, to use a Boy Scout slogan, "be prepared." This will be the means whereby you will get more pictures and less disappointments. Have your camera ready, open, slide drawn, etc. Who would think of gunning with no shells in the gun, or the gun not cocked?

In photographing wild animals, not the park-kind, however, it is necessary when approaching the subject to try to stalk as near as possible and obtain a picture before going closer, as by this method you get some kind of a picture, even though small, before the animal takes alarm and leaves for his hide-out. Then if it does not get alarmed at having the camera pointed its way, you step up a little closer and, perhaps, get just the picture you want. When photographing young birds, do not keep them in the sun too long, or disturb the nest unnecessarily, as they may soon perish.

It being about 7 A.M. in the woods, and the middle of April, on a cloudy morning, I thought I would play safe before going near the stump. I set up my 6½ x 8½ Cycle Graphic and carefully focused on the hole in the top of the stump. Having the platcholder in position, shutter set and slide drawn, holding the bulb with a long tube in my hand, I carefully approached the stump, and with a stick began to knock gently on it. Hearing something inside, I stepped back just in time to see a nice flying squirrel come from the hole and hesitate as it went over the top. My shutter being set on bulb, I gave about one second exposure, this being enough time to fully expose the plate, as the accompanying picture will show. I believe in the old adage—expose for the shadows, let the highlights take care of themselves. Better tone-values are recorded by full exposure when possible. A snapshot at this hour and lighting would have proved to be greatly underexposed, yielding a print of no details in shadows and "white-wash" high lights.

While Jill stepped toward the camera to replace the slide, the squirrel leaped to another



FLYING SQUIRREL
DR. J. B. PARDOE



tree, ran to a higher branch, then jumped in the air, spreading its wings, as it were, by stretching the loose skin between the front and hind legs; it literally sailed down the mountain-side, landing again at the base of a tree-trunk, at the bottom of the hill. "That is a fine illustration of why they call them flying squirrels," said Jill.

Putting her hand in the hole, to feel the nest, Jill felt something soft. She withdrew her hand and brought forth a baby squirrel. It was very small and sleepy. There were four other babies in the nest. We thought we would leave them to be photographed later, when they were older and better subjects photographically; but that day never came. Going back, a few days later, to see how the baby squirrels were getting along, we found not the squirrels. Not even the stump was left. The whole thing broken off and demolished. The work of thoughtless boys, I presume.

A word of caution might be a good thing, here. So many agencies are at work destroying our feathered songster-friends. Let every human being try to protect these harbingers of spring.

I was walking along with some hunters in the fall, carrying my large camera and tripod and trying to get a good picture, which meant more to me than any dead game, when one of the gunners shot at a bird high in the air. Instantly the bird came sailing down and lighted close by, on a small bush, apparently not hurt, in the least, and still not able to fly. This was the most beautiful small hawk I ever saw. Going toward it, I picked up the hawk without any trouble. Here, I thought, is my chance to get a good picture of a sparrow-hawk. Placing my pleasing little feathered subject on a limb, in front of a dark cave-opening, I got some good exposures, and the cave-opening gave me a good black background. This dark background effect may also be obtained by posing the subject in front of an open barn-door, or wood-shed, with a dark interior. Exposure, $1/25$ of a second, Bausch & Lomb Protar, F/77, Cramer color-sensitive Plate. I carried this bird home, and it became quite tame, eating from the hand and riding around the grounds, on my head and sometimes on my shoulders, never making any effort to get away. I made a careful examination for shot-marks, but was never able to find them. Why the hawk did not fly away, I was never able to tell. This bird died of arsenical poisoning. I was in my studio mounting a couple of pheasants, in which I had used powdered arsenic freely to poison the skins. The hawk would often sit by the hour on his little stump, which I had prepared for his comfort, watching me work at the art of taxidermy. One day, I left the room for a short

while. On returning, I found the hawk had torn and eaten parts of the freshly poisoned skins and some poisoned scraps of meat. This was his undoing.

The young Green Heron was lifted from the nest to pose gracefully with his rubber-neck and fishy breath. Expanding his neck to its full length, was his most gracious pose. A heron-rookery, with its long legs, long neck and fishy-



CHICKEN-HAWK

DR. PARDOE

smelling inhabitants, affords many studies for the camerist. Herons may have their dead-fish smell; but wait till you go to the nest of the vulture or Carrion Crow, to photograph the young in some swamp, where they will promptly throw their dinner up at you. They defend themselves by regurgitating the putrid flesh of dead animals. You will wish for a gas-mask



YOUNG GREEN HERON
NEST OF COMMON CROW
DR. J. B. PARDOE

here. Exposure, 1/25 second; bright sunlight; stop, F 8; Stanley plate; developed with pyro; development was carried too far, thus producing a very dense and contrasty negative.

The crow-nest with eggs or young are good subjects for the nature-camérist. Photographing a nest in a tree-top is not always so difficult, if an adjacent tree is the right distance away, so that you can get a good focus on the nest desired. Trimming all intervening branches away, so that an unobstructed view may be had, I find the Marble Folding Pocket Axe a great help in the woods. If the tree you want to climb is too big in circumference to get a hold of, or no lower branches are in reach, you can cut some small trees, a little larger than a broom-handle, and with your axe used as a hammer, nail them to the butt of the tree, with wire-nails, thus forming

may be shaken by the wind and give a blurred picture. Use a good tripod, large enough to have strength. A Crown Folding Tripod top is useful in photographing tracks. One second; stop, F/6.4; Protar lens; Standard Orthonon plate.

Three of a kind—three little jays sitting on a limb. Saucy, pert and trim. Blue they were in color, but not in disposition. They were bright and intelligent. Just about ready to leave their first home, which was in a cedar-tree about four feet from the ground. Lifting the little jays carefully to a limb prepared for them, I made a few exposures, using a white sheet on the ground, held at an angle as a reflector to lighten up the shadows underneath. The mother-bird was much disturbed by these proceedings. She sat on an oak-tree limb, a few



SNIPE-TRACKS IN CLAY

DR. J. B. PARDOE

a rustic ladder to reach the branches above. Another way is to cut a smaller tree, and lean it against the tree you wish to climb, as the boys say, "shinnying up." A Kodapod is a great help in fastening a camera to a limb or fence, or even to a stake driven in the ground.

Snipe-tracks in the mud, or animal-tracks in the snow, form an attractive branch of nature-endavor. You can stop down to get a good depth of focus, as your tracks will not move; but a rickety, poorly made, or too light a tripod

feet above our heads, and struck the limb violently with her bill. Realizing that this did not scare us away, she gave a call in imitation of a hawk. I suppose she thought that we would surely run, if we heard a hawk coming. Exposure, 1/25 second; F/7.7; Protar lens; Cramer Crown Plate.

"Going, going, gone!" is interesting, as it shows in a degree how an owl gets away with his dinner. He is especially fond of mice. After a certain number of mice have been swallowed



THREE OF A KIND

DR. J. B. PARDOE

whole, and digestion has taken place, the owl ejects from the stomach, through the mouth, indigestible portions of the animals he has swallowed. These form little bundles or pellets containing the hair and bones of the animals. Usually one or two skulls are imbedded in each hairy ball. I know a certain pine-tree, that I call the owl-tree, because so many owl-pellets are found beneath it. This owl was very glad to get his allotted mouse for dinner and would promptly start to swallow it, head-first, with the tail gradually disappearing.

Putting my finger toward him, he would take it in his bill and gently shake it, as if saying, "Thank you for my dinner." Exposure, 1/25 second; Protar lens; Standard Orthonon plate.

The great horned owls are very destructive, savage and tireless hunters of game, destroying large quantities. They easily overtake and pick up the swiftest rabbit. Among some chickens found in the nest of the Great Horned Owl, was a skunk. The owl pictured with this article was caught when young and raised by Lee Clark, a naturalist of South Amboy, New Jersey, who gave it to me. It was so strong and fierce, that I could not take it home. Placing it on the near-

est post, with the aid of several assistants, I finally made an exposure of 1/50 of a second with my 5 x 7 Graflex.

Baby-owls with their downy covering and big sleepy eyes are most interesting pets, and are easily photographed. Sleepy-heads were my pets that came to my call, coming in at the open window and eating from my hand. One day, I missed these interesting pets from my den and could not find them anywhere. Glancing up on the wall, I found them perched among some stuffed birds including several other owls. Here they had camouflaged themselves, thus escaping my notice. When irritated or angry, they would snap their bills and blink at me. Exposure, 1/25 second; F/7.7; Protar; Cramer Crown Plate; good light.

My professional duties often keep me indoors administering to the ills of suffering humanity, and I cannot fly to the woods from which cometh my strength, to seek fresh air and sunshine, thereby resting the mind and body, so I sometimes bring some of nature's treasures to my studio-office.

Having a few spare moments, or during a luncheon-hour, I lounge near a window and



Young



Young



Young



YOUNG SCREECH-OWLS

DR. J. B. PARDOE

photograph subjects like this moth emerging from the cocoon; a spider, toad, a toad-stool, and many other interesting subjects of a similar nature that can be transported and kept in the confines of the office-studio.

Born again,—one might well take a lesson from this wonderful transformation from a crawling and, sometimes called, ugly worm to a most beautiful butterfly or moth-creation. The eggs are hatched, the caterpillar begins to eat and grow until it spins its cocoon, within which it spends the coldest winter without harm, emerg-

ing in the spring to use his back as an emergency-tripod. I did not have much faith, but tried it and the result turned out to be quite satisfactory. Exposure, about $\frac{1}{2}$ second; shutter set at time, and open and closed as carefully and quickly as possible; Tessar F/4.5; $3\frac{1}{4}$ x $5\frac{1}{2}$ Graflex; Premo Film-Pack; Velox print.

The opossum was photographed easily in its natural habitat. I remembered an old chestnut-tree, of my boyhood days, where I once found an opossum asleep, in a natural cavity, in a large lower limb, which could be looked into by standing on a large rock, near by. Going by this 'possum paradise with our cameras, one day, I got up on the rock to look, and, sure enough, there was Mr. 'Possum. The tripod-legs were not quite long enough to bring the camera in a good position to focus on the hole-entrance. I took my folding-saw, which I always carry when on a nature-tramp, and cut three saplings, which I tied to the tripod-legs, which lengthened them just enough. With Jill's assistance, I stood on the rock and got my long-legged camera in position. Everything being ready, Jill gave a poke with a small switch in an opening in the lower part of the limb. A couple of pokes, and the opossum came up and poked its head out, uttering a growl. They say, he who hesitates is lost. The opossum hesitated and lost its likeness. $\frac{1}{3}$ of a second; Eastman 5 x 7 Portrait-Film; Protar lens; 3 P.M., in June.

The ground-hog or weather-prophet, which tells us winter is not yet over, is shown eating an apple, though his favorite and principal diet is clover or grass. $\frac{1}{25}$ exposure; Graflex negative.

Another time I found in the woods, and brought home with me in one of my bag-pockets, two box-tortoises. I have two big pockets made on the inside of my coat, something like the pockets in a hunting-coat—large and roomy, not unlike game-bags. Each of these will hold several platcholders. In this way, I can have one or more holders with me, ready to use without going to the camera-case to get them. Another advantage is in being able to work in a muddy marsh, or in wading a brook without danger of dropping the holders in the mud and water.

Walking along the edge of a trout-stream, one fine spring-morning, and enjoying the beauties of nature, I heard a rustling in the leaves on the high bank above me. Thinking it was a black snake that I had disturbed from its sun-bath, I rushed up to the bank and found my box-tortoise. He was retreating hastily down the bank, toward the brook. Wondering why a land-turtle should be in such a hurry to get to the brook, I picked him from the dry leaves and, to my surprise, I



GREAT HORNED OWL DR. J. B. PARDOE

ing transformed into a beautifully colored winged angel-like insect. Many pleasant hours in one's home or office may be well spent in making pictures of life-studies, from eggs to the fully developed moth or butterfly. If the light is weak, the flashlight may be used with success. I find the Eastman Flash-Pistol a good one. Exposure, 30 seconds; bright light; six feet from south-window; 12-inch Velostigmat, F/32.

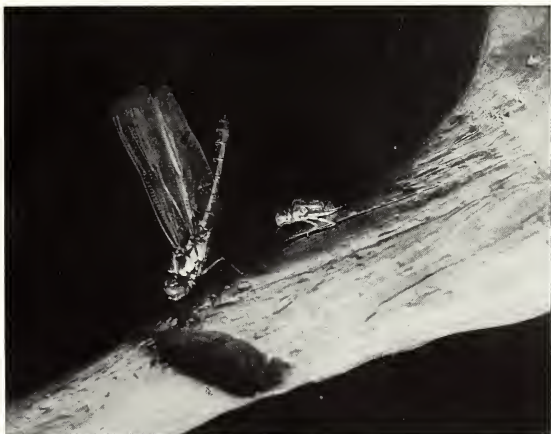
The picture of the dragon-fly, just out of its shell, was made on the edge of Lake Hopatcong, New Jersey. With my guide, I had been to visit an Indian Rock Shelter. Returning via the edge of the lake, we discovered the dragon-fly over a rock. The light being poor, I could not get a good snap, and my tripod was useless, as I had lost the screw. The good, old guide—being a man of steady nerve and good judgment—got down on his hands and knees and, bracing

ADAMANTINE
VARIABLETATE



DR. J. B. PARDOE

BORN AGAIN



DRAGON-FLY LEAVING SHELL
OPOSSUM IN HIS HOME
DR. J. B. PARDOE



GROUND-HOG
BOX-TORTOISE
DR. J. B. PARDOE

found numerous ants clinging to his legs, neck, tail and other exposed parts of his anatomy. They looked as if they were trying to hold and eat him alive. Brushing the ants from the turtle, I looked back on his trail, and found he had walked along the edge of an ant-hill. This, I think, explains the reason the ants were clinging to him. I say, "him," because the male box-tortoise has bright-red eyes.

Photographing this turtle was not very hard to do, as he was very tame and easily placed where wanted. I kept him as a pet and for study, for a long while. I found he was very fond of angle-worms. He would grab a big night-walker, cutting it in two, then swallowing each half separately.

Another interesting branch of photography is snakes, frogs, lizards and toads. The Reptile Study Society of America, with offices at 782 East 175th Street, New York City, organized by Dr. Allen S. Williams, is a growing society of interesting people who hunt and study snakes. The black snake, pictured herewith, was caught on one of our snake-walks. It was handled until it became quite tame, and placed on a nice, warm and sunny stone to have its picture made. Quite a big difference in the disposition of snakes is manifested. Some strike and bite immediately on being caught, and continue to do so, never seeming to get really tame. I have caught them when they never made the least effort to bite, even from the first time when picked up. Last spring, I saw two large black snakes sunning themselves on a stone-pile. Getting as near as I could, I made a run and caught them, one in each hand, before they could escape in the stones. One was five feet, and the other five feet four inches, in length.

One of these snakes would always strike and bite at every opportunity, and the other never attempted it. In putting my hand in the box to lift them out, one would always try to bite. I had these snakes five months before letting them go, and could never tame them, in the least degree. Non-poisonous snakes are a benefit to the farmers, for they destroy large quantities of rodents which consume grain and carry disease. Only two poisonous varieties are in the Middle Atlantic States—the timber-rattler and the copperhead. The black snakes are great climbers, often climbing cliffs and trees. Some years ago, I came upon a nest of black snakes. Rushing at them with a tree-branch, they disappeared quickly. In looking for them, I discovered some of them climbing a cedar-tree, from limb to limb, going from that to a large elm-tree and, finally, coming to rest in the topmost, outer branches.

The garter-snake was found crawling rapidly

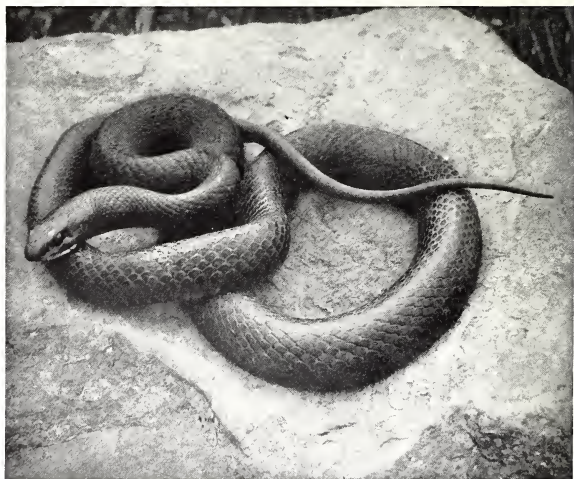
from one stone to another, trying to hide. Coming to a stick, this little snake, to all appearances, had made good its escape. Lifting the stick, I found this fine, little fellow securely tucked away in the groove of the limb. Propping up one end of the stick, I made a slow snapshot with my compact Graflex. Premo Film-Pack used. Putting out my hand and touching the snake—one bound from the stick, and a rapid retreat made among the grass and leaves.

The tramp snake was nearly blind from shedding its skin. Snakes that are about to shed their skins have a light-colored skin over their eyes, which makes them appear as if they were blind. This picture made with the 5 x 7 Auto Graflex; 1/25 second; Protar lens, F/7.7; Eastman Portrait-Film; enlarged on P. M. C.

The Indian Pipe mushroom, I suppose, is so called because of its resemblance to a pipe. A collection of mushroom-studies put in an album makes an interesting exhibit to be admired and studied, at leisure. I often bring some specimen home with sufficient earth, or bark attached, to keep it fresh for several hours. For this purpose, I use a tin botanical case with shoulder-strap attached. It may be purchased at a sporting-goods store. This case is also the best I know of in which to carry living wild-flowers. Exposure, six seconds; F/6.4; dull light; in deep woods; Eastman Commercial Ortho Film.

It has been said that a real amateur photographer is never seen twice with the same camera. My photographic dreams began when I was about twelve years of age, and I have been at it ever since. This is my one hobby I never expect to give up. My first camera was a box; that's all. Since then, I have used almost every size and shape, from the baby Brownie to the 8 x 10 Graphic, and I must say that I have liked and enjoyed them all. My photographic equipment consists of a 6½ x 8½ Graphic. This is a good old stand-by. I have carried it on many hundred walks, and made thousands of pictures with it. I believe the English call this size a whole-plate camera. My next, and the one I use the most of the stand-cameras, is a 5 x 7 Eastman long-focus view-camera—very durable, strong, and provided with a good long bellows. This is very desirable, indeed, in serious nature-work. I can make the image large enough to fill the plate. I have made a life-size picture of a horse-fly. With the short-bellows camera this could not have been done.

I think any kind of work or play must be taken seriously if you are to get the most good out of it, and enjoy it the most. When you do a thing, put your whole heart and soul into it. I think this is a good rule for success. You practically



TRAMP-SNAKE
BLACKSNAKE
DR. J. B. PARDOE



GARTER-SNAKE IN LOG

DR. J. B. PARDOE

can't help getting enthusiastic and, sometimes, excited in your nature-photography. It looks good to me to see a wild animal, bird or butterfly on my groundglass. I would go many a mile to get one good picture of any nature-treasure.

I remember once stalking a wild goose that was sitting at the edge of a lake. I was about seventy-five yards away. Crawling and squirming along on my hands and knees, I had a mental picture of how fine it would look, if I could get only near enough to make a sizable picture. After much crawling, I finally reached a point behind a slight knoll, where I felt safe in sticking up my head to see if it was still there. Sure enough, a fine picture that bird made, a prize one, surely, I thought,—with the tall flags and the lake for a background. Now, I began to be very much excited after my long and careful stalk, and the game in gunshot, as it were. I rose up gradually, and was about to try to get the bird on the groundglass and in focus, when I began to tremble so I could not hold the camera still, no matter how I tried. I have hunted with a gun and rifle, but nothing like this ever happened to me before. Here I was about to shoot my game with a camera and could not, because I realized that I had a gen-

uine case of buck-fever. I said to myself, "I'll be darned; can you beat that?" I am glad no one is here to laugh at me. An actual case of Kodakitis or pictorial chills and fevers. About this time, I guess the goose scented me, for it beat a hasty retreat with its powerful wings. When the goose had gone my goose-fever left me, and I became normally mad, saying something under my breath.

Now, back to the cameras! My next one is a 4 x 5, also with a long draw. It's a good pictorial outfit. It is lighter than the other, which is an advantage. I have some admirable 14 x 17 enlargements I made from these 4 x 5 plates. This camera is fitted with a 9-inch Verito, and fine artistic negatives can be made with it. I also have a wide-angle lens, a good rectilinear, with this outfit, and two color-screens.

I have, furthermore, three Graflex cameras. These instruments are great for getting birds on the wing. My 5 x 7 Auto I have fitted with what I call my cannon—a 17-inch Ross Telecentric. This is excellent for snapshots at a distance, which may be done without alarming the subject, and also for work in the studio as a portrait-lens. It gives fine perspective and beautiful atmospheric effects. My 3½ x 5½

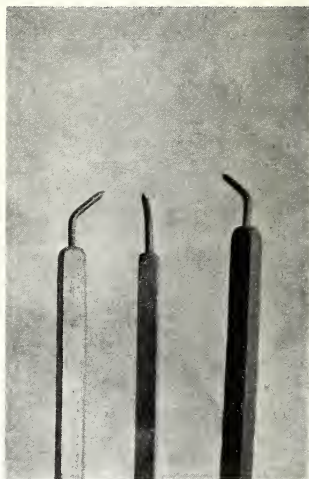
Graflex is well worn with usage, and the Bausch & Lomb Tessar has turned out some superbly sharp insect- and snake-studies.

My 4 x 5 Telescopic Revolving Graflex is new, and I have not had an opportunity to use it much. I carry a Pocket-Kodak almost everywhere I go, and use it a great deal, taking a snap at whatever takes my fancy. My favorite lens is a B. & L. Convertible Protar, series VII. Three focal lengths are available in this lens of many uses. A tilting tripod-top is another convenience which I appreciate; also an Imp Flash-light Gun for night-work—caves or in the dark forest-shade. The following stunt is quite a help, as in nature-study photography it is often desirable to place the camera in a low position—for instance, when photographing flowers, mushrooms, mosses, lichen.

The straight spikes in the tripod-legs, at this angle, do not grip the earth, sometimes, but have a way of slipping. To obviate this, remove the spikes and replace them with wire-nails, the size to fit the holes, first filing or grinding off the heads of the nails. After inserting the nails, I bend them at an angle best suited to stick in the ground and keep the camera from slipping. The points of the nails are sharpened. This is also a good thing when working on smooth floors, rocks and sidewalks.

My favorite plates are the Standard Orthonon. I now use a lot of Eastman Portrait-Films, as they obviate halation, are light in weight and give good color-values. Then, too, if they are let fall, they do not break. I once lent a prize nature-negative to a dealer who wanted to enlarge it. He would of course be careful of it. The first thing he did, when I handed it to him,

was to lay it on an uneven surface and break it by resting his elbow on it. With an Eastman Portrait-Film, this would not have happened.

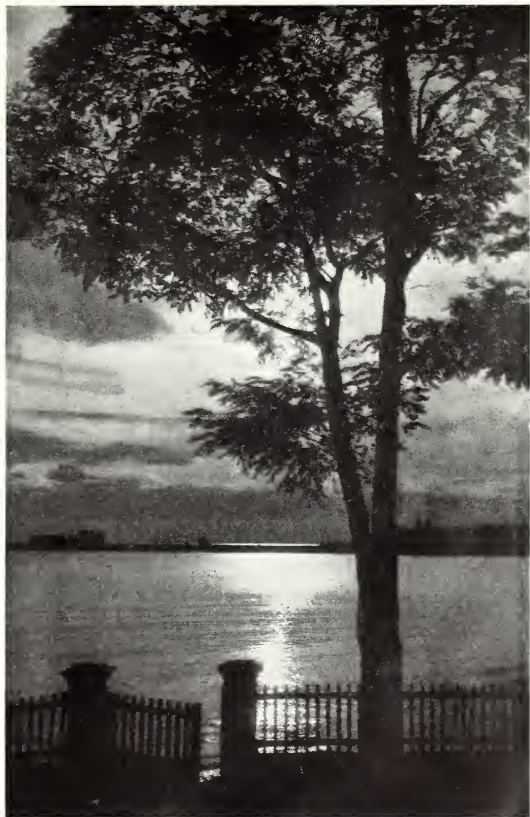


NAILS IN TRIPOD-LEGS

It was Theodore Roosevelt who said, "It is an incalculably added pleasure to any one's sense of happiness, if he or she grows to know, even slightly or imperfectly, how to read and enjoy the wonder-book of Nature."



TRIPOD ON ICE



"Come, wander with me, for the moonbeams are bright,"



MOONLIGHT
J. I. HORNING

The Pictorial Motive

A. HORSLEY HINTON



WHILST the chance splutterings of ink from a fallen pen may suggest familiar forms and figures, so it is possible that a clumsily made photograph may suggest ideas and act upon the imagination as forcibly as though it had been deliberately intended to so act, and the ideas prompted had been the motive instead of the accidental result. Obviously, however, the uncertainty of the outcome precludes such a course from serious consideration. A work, especially art work, must be considered good in proportion as the result obtained is a fulfilment of the intention. An intention or motive, therefore, is essential to the making of a picture.

Whilst the term "picture" is commonly used to signify a facsimile image of anything, we shall have to understand it in a much more restricted sense in the present subject of our study. I cannot lay too much stress upon this, that in art a picture is not essentially or only a representation of certain objects in nature. If we look at an admittedly good picture—for instance, a great painting—it is possible that we recognize it instantly as representing certain natural objects; but if its effect upon us ends there, we may be quite sure of one of two things—either we are approaching it with wrong expectations, or else this particular picture, and perhaps pictures generally, are not for us—we have not a natural taste or sympathy for pictures, just as some men do not care to read poetry or are unmoved by music.

But in most cases, it will probably be found that, quite apart from recognition, we shall be conscious of other feelings. I have not space to argue it here, and surely no argument is needed, to point the fact that a really great picture gives the beholder a sensation of pleasure apart from the fact that pretty or familiar objects, or pleasing scenes, are depicted. Now this sensation of pleasure may be of varying character. It may be that we feel again the tremulous, fleeting light which comes from the western horizon and spreads over the landscape, gilding the outlines and pouring like a glowing, warming flood into every portion, or the gladness of the summer-sunshine sparkling in the tree-tops, glinting on the water full of life, richness, abundance, calling from out the cool shadows the summer-breeze which rustles and bends the corn, then stilling it again, stilling it in a warm embrace as it passes into the shimmering distance.

Or there may be a pleasure of a more thoughtful kind in the gray stillness of dawn, or in the sense of dreariness and desolation of winter, a time for pensive thought and calm imaginings, a pleasure of a quieter, subtler order; or it may be the æsthetic senses are stirred by a representation of the beautifully moulded and symmetrical human form. Yet, again, one's sympathies may be stirred by the suggestion of more homely scenes, sorrow or suffering, noble sacrifices, or great deeds. In every case let it be noted, and never forgotten, that the strongest part of a picture is the sensation and feeling which it creates, this being done through the agency of certain familiar objects more or less accurately represented with more or less completeness.

The motive, then, in all pictorial work is to convey some thought or idea or sensation by means of a chosen subject. It may be that some scene in nature awakens some emotion, and we then endeavor to depict that particular scene and the objects it contains *in such a way* as to work upon the imagination of those who see our picture, so as to create in them the same feelings; or it may be that we first desire to give expression to certain sensations and then choose a subject which will best convey those feelings—in either case the motive is the same.

I will not dwell on this part of my subject a moment longer than I feel to be imperative; but I should probably leave more doubt than I hope to do were I not to refer to the fact that we must distinguish between the thoughts which the picture may promote, which also it was the artist's motive to create, and those which the beholder may arbitrarily attach to it. A beautiful landscape, let us say, of mountain and lake will *create* in the beholder thoughts and feelings which he did not possess a moment before. Art has been creative of new ideas. But another beholder may at once gather round the picture of the mountain recollections of a previous excursion, and commence speculating on the altitude of the mountain and the difficulties of its ascent, mingled with the memory of a hundred happy experiences which have been called up by this representation; but these feelings have not been *created*, only thoughts and memories have been revived, and probably any picture of a mountain would have done as much—indeed, it needed not a work of art or a picture at all; the pages of a diary or a guide-book would probably have served nearly as well.





THE CATHEDRAL AT ALBERT, FRANCE

WILLIAM D. KELLY

From the foregoing we might now formulate a maxim to the effect that art—that is, in our case, pictorial representation—employs *the image of concrete things to create abstract ideas.*

It is a matter of experience that a representation of anything which first and before all else impresses us with its startling likeness to the original, or sets us wondering at its exquisite execution, does not readily appeal to the imagination, and hence we must be content to confine ourselves to working out a single motive—that is, we should either be satisfied to produce graphic memoranda or records which remind us, and others, of events and scenes, or portray objects pictorially that we may create new sensations in others.

We may, if we choose, win applause for our skilful manipulation by producing a technically perfect photograph, or we may feel satisfaction at having used our photography for the production of an astonishingly truthful record, and again we may with perfect legitimacy employ that same process so as to carry to others feelings and sensations which cannot be depicted, but which we may be able to express in such a way that they will be understood by those who are naturally in sympathy with us. [Extract from Hinton's "Practical Pictorial Photography."]

Swing-Back or Tilting Camera

THE manipulation of the swing-back in portraiture is not so thoroughly understood as it should be, and the difference in performance of portrait lenses of the old type and the modern rapid anastigmats, which are now coming into use, help further to mystify the inexperienced. It has been a source of disappointment to some old photographers to find that the flat field of their new anastigmats did not accommodate itself so well to a sitting figure, or even to the face, neck and breast of a bust-portrait, as did the old curved-field lens, and that, although the plane of definition could be shifted by using the swing-back, it was only in one plane that definition could be obtained at large apertures. When using the swing for sitting figures, there is always the difficulty of the increased size of the hands and knees, which results from their being brought into focus and portrayed on a different scale to the head. This defect may be reduced to a minimum by raising the camera considerably and tilting it downwards, so that when the back is in its normal position the plate is nearly parallel with the general plane of the figure. Care must, of course, be exercised in posing and lighting the head, that an easy position which suits the features is retained.—*The British Journal.*

Sand-Dunes and the Camera

JOHN S. NEARY



AND, sand-dunes, the ever shifting sand-dunes! Man has accomplished many marvelous things, but he has never been able to hold a sand-dune in one place. There is nothing more fascinating than a few hours spent now and then tramping over these sand-hills, wondering at their many sizes and shapes, watching the light and shadows as they flit from place to place. God in his great goodness has provided us with no end of beautiful things in nature. His handiwork is supreme. The sand-dunes are a part of His handiwork; they are like the waves of the ocean, driven from place to place by wind and storm.

My experience among them has been in the neighborhood of Point Pleasant, New Jersey. From this point south they can be found in all shapes, twisted, washed, under-cut and beaten upon by sea-wind and storm. For a number of years, I have spent some of my vacation days tramping over these hills with my camera, photographing this one and that one as the sunlight played about them, the fleecy clouds floated overhead and the old ocean near by ready at any moment to be lashed into a rage. I believe that the best results can be obtained with a camera on a tripod before 10 A.M. or after 3 P.M. During these hours the shadows are long. The light is much softer during these hours of the day. As a usual thing beach-sand is all of one color. To overcome this you must have shadows. Therefore, to obtain good results the exposures should be made at the time of day when the light is the softest and the shadows are the longest. Then you will avoid hard, harsh, contrasty negatives, and your finished picture will have all the shades from light to transparent shadows. A negative of sand-dunes that is hard and contrasty—one that will make a print of two shades only, namely, black and white—should be broken up, for it is a waste of time, material and money to make a print from it. The pictures published with this article were made late in the afternoon during July and August. The light was soft, low and clear. The plates used were double-coated Orthonon, with a medium color-screen. A deep color-screen makes the clouds too heavy. On arriving here, if you stand in one place and look in all directions, you will become bewildered at the sight before your eyes—you will see too much to photograph. Locate a sand hill or two, then look for the light and shade that play about them. If you dis-

cover something that is pleasing, set up your camera, locate the best view on the groundglass and make the exposure. Of this you must be the judge, as you will be on the ground. One can get the best results by using double-coated plates, of which there are several well-known makes on the market; also a medium color-screen. With this kind of a plate and color-screen, and with proper exposure, you will obtain good negatives and include clouds—if there should happen to be any.

A sand-dune picture with clouds is worth a dozen without them. In some instruction-books you will find directions that read as follows: "Be sure that the sun is behind you and shining directly on the object you are photographing." This may do in some cases, but not in picturing sand-dunes. Pictures are composed of two elements—light and shade; without them, your picture will be an absolute failure. Suppose that an artist who paints on canvas had only one color of paint to work with; wouldn't he have a very hard task to produce a picture? He would have to content himself with a silhouette.

In tramping over these sand-hills, you will probably experience some difficulty in finding a suitable view. Confine yourself to small spaces, not a bird's-eye view. Look around for one or more dunes that are as irregular as possible, or some where the wind and storm have left small ripples or waves of sand about them. If there are large, smooth places that do not appear well in the view, break them up by walking over them in the direction that the sun will cast a shadow in every footprint. In looking over sand-dunes you apparently see no beauty in them, but the beauty is there on all sides. In your school-days you very often, no doubt, heard your teacher say, "Concentrate your thoughts on your lessons." You can imply the same in looking for suitable pictures. Concentrate on small views.

After you have spent a few delightful hours tramping over the sand-dunes, and photographing, go home and lock yourself in the darkroom to carry out another step towards the complete picture. Every lover of photography has his own hobby for darkroom-work, and I have no doubt that every one can obtain good results by using his own method of developing. My hobby for a developer is pyro, used as directed by the plate-maker. Why should we experiment after he has spent time and money in



SAND-DUNES
JOHN S. NEARY



SAND-DUNES

JOHN S. NEARY



SAND-DUNES

JOHN S. NEARY

perfecting a developer for his plates? If we should find a developer that is suitable, it will be no better than the one given by the plate-manufacturer. We all have a hobby in the kind of paper we use. To me, a sand-dune picture looks best on a mat-surface paper. A paper that is a little rough helps to show up the appearance of the sand.

If this line of photographic work has never appealed to you, think it over, and I am sure that you will decide to give it a trial, and you will be doubly pleased with the time you will have on the barren waste of sand-hills. The phrase, "No man's land," used by our soldier boys during the late war, fits the uncultivated places very well.

The camera was a $6\frac{1}{2} \times 8\frac{1}{2}$ view camera on a tripod. The lens was an Anastigmat of

twelve-inch focus; diaphragm, F/16. If you use a diaphragm smaller than this, you will sharpen up the distance, and thereby lose the pictorial effect. Your picture will not show the distance, as it should, and you will wonder what is the matter with it. The exposure of one-fifth to one-tenth of a second I found was ample, according to the light and time of day these photographs were made. The negatives were developed with pyro, a three-solution developer, in a tray. We are told that there is no safe light for the darkroom. That may be; but I know it is safe to cover up your plate while it is developing, with a piece of cardboard or something that will protect it from the light. By doing this, you will very seldom fog your plate. Take no chances with your darkroom-light, even if it is absolutely safe.





EDITORIAL



Photographic Terminology

AS everybody will admit, we are passing through a period in which time-honored customs are disregarded, and lofty standards of living and art ignored and even lowered. If we would maintain the civilization that makes for the enjoyment of the purest and noblest things in life, we must resist the influences that emanate from degrading sources.

Amidst these efforts to preserve our heritage of exemplary living and methods of diversion, we ought not to lose sight of the little things that aid in the thorough enjoyment of the arts and letters. The old saying, "Whatever is worth doing at all, is worth doing well," applies to the art or hobby of picture-making by photography, and to the correct use and distribution of photographic terms. Much progress has been made by two or three photographic journals, during the past few years, in improving and enriching the photographer's vocabulary. For instance, several years ago, the Editor of this magazine suggested the term "photo-finishing," as a short and suitable substitute for the somewhat lengthy appellation of "developing, printing and enlarging," and "photo-finisher," to designate the specialist. The erudite editor of the *British Journal of Photography* approved and eventually adopted this innovation. He has not only accepted others that seemed feasible and practicable, but has introduced a number of admirable modifications of his own. Desiring a succinct expression for making a photo-engraving or halftone of a photograph, and finding the term "to reproduce" inadequate, the Editor originated the verb "to halftone." The photo-engraving firm welcomed the term with joy, and is using it regularly. To say that a certain picture has been *halftoned*, is a clear and adequate mode of expression.

An eminent Boston art-critic, dissatisfied with the indefinite term, "water color," writes it now as a solid word—"watercolor." To use this word as a verb, as to *watercolor* a photograph, also appears as a valuable addition to the language. Again, "post card" has become "postcard" with careful writers—a practice that is being adopted by our English cotemporaries. The term, "cinematography," was appropriated by the English photographic press, from the

French, without considering its origin. Not long ago, however, it was discovered that, having been derived from the Greek, the word should be spelled, correctly, "kinematography"; and in this form it is being used by the *British Journal* and *Photo-Era*. Thus we have also the derivatives "kinematographer" and "kinema."

Yet a totally inexcusable practice is the general use, in all English-speaking countries, of the German word "matt," as applied to British and American mat-surface printing-papers. Why these mediums were not at once designated as mat-surface, when "mat" is the exact English equivalent of the German "matt" (dim, dull, dead), is a mystery. The term "matte" is likewise German, meaning a mat—a card forming wide margins for a picture. During the war, when the English photographic press was excusably hostile towards enemy-goods, a timely opportunity to eliminate distasteful names and terms was presented; but it was not utilized.

For the sake of imparting clarity and quick understanding to phrasology in matters photographic, *Photo-Era* has not hesitated to introduce compound words, and even to make them solid—a practice entirely approved and adopted by such an authoritative and progressive publication as the *British Journal*. Thus, "dark room"—an obviously ambiguous term—first became "dark-room" and, later, "darkroom," meaning an apartment devoted exclusively to photographic use. To avoid ambiguity, such eminently ludicrous terms as "lantern slides," "printing frames," "enlarging notes," and "drinking cups" become convincingly intelligible when used as compound words.

It may not be amiss to refer here to the well-known anecdote of the grocer who received a written order for "half a dozen of black hens' eggs." Unable to distinguish, as he explained to the errand-boy, black hens' eggs from any other kind, he allowed him to pick out what he considered eggs that corresponded with the order. Thereupon the boy selected six of the biggest eggs in the box, explaining that those were black hens' eggs and paying only the regular price for them. These cases of uncertain meaning remind the Editor of an incident in the popular comic opera, "The Mascot," where the heroine rebukes her lover thus, "You must say what you mean, and mean what you say!"



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.**

4. Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. **Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Rainy-Day Competition

Closed April 30, 1920

First Prize: D. R. Battles.

Second Prize: M. Sugimoto.

Third Prize: Henry A. Hussey.

Honorable Mention: Harry J. Beeler, Jr., Henry Boak, Robert Borgström, Daisie B. Chapell, George W. French, F. W. Kent, Mrs. Albert K. Ludy, Ozan K. Nunome, Edwards H. Smith.

Subjects for Competition—1920

"Miscellaneous." Closed May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.

1921

"Winter-Sports." Closes January 31.

"Home-Portraits." Closes February 28.

"Copying Works of Art." Closes March 31.

(Paintings and Statuary.)

"Home-Scenes" (Interior). Closes April 30.

"Street-Scenes." Closes May 31.

"Summer-Sports." Closes June 30.

"Summer-Flowers." Closes July 31.

"Shore-Scenes." Closes August 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.



DEJECTED

D. R. BATTLES

FIRST PRIZE—RAINY-DAY PICTURES

Light-Fog

WE all know what happens when the camera-bellows suddenly develops a tiny hole which can scarcely be seen, but causes disaster to the sensitive plates. Yet exactly similar conditions often obtain in many photographers' darkrooms, causing mysterious marks on sensitive material.

When printing Bromides, some workers are apt to regard the process as one that can be worked in a flood of yellow light, and that a little stray reflected white light does no damage. The working-light should be of an amber color rather than canary yellow, and it would well repay any worker to test the safety of the light in the following way:—

Place a piece of Rapid Bromide Paper film-up at the usual working-distance from the light, put a couple of coins on the sensitive surface, and leave for, let us say, ten minutes. Then develop the paper for the usual time, and note the result. If no fog appears, the light is reasonably safe; but many workers will be astonished at the amount of light-fog given by what was hitherto considered a "safe" light.

Another prolific cause of fog is white light coming under or over a badly hung door; but we think that, perhaps, the largest amount of damage is done by printers who open the package of Bromide paper, place the pile handy, and then switch on white light in their printing-box to adjust the negative. The reflected white light causes fog on the edges of the paper. The remedy is always to use a light-proof box which can be quickly opened and shut, to hold the paper before and after exposure.



From a French Naval Officer

Mon cher Monsieur French:

Mes sincères remerciements.—*Photo-Era* est la plus charmante et la plus intéressante des revues photographiques du monde.

H. CHARDON.
Captaine de frigate,
LORIENT (France).



WET NIGHT ON BROADWAY

M. SUGIMOTO

SECOND PRIZE—RAINY-DAY PICTURES

Exposure-Meters

WITH every increase in the cost of the sensitive material which the photographer uses, there is a corresponding increase in the value of any appliance or system which helps to prevent needless waste of that material; and foremost in such a category must be placed the exposure-meter. We should hear much less of the cost of photography as a hobby, if every plate or film exposed became a good negative; and one great reason why it does not, is that the exposure is incorrect. Now we do not in the least overestimate the value of meters when we state that in quite ninety-five per cent of the exposures made by amateurs, a meter will indicate accurately what exposure would be correct.

Why then is it that there are still so many failures? In a great many cases they are due to the non-use of a meter. The photographer argues that as he has a hand-camera with a single speed uncontrollable shutter, he need not bother himself about what exposure to give. True; but he might profitably bother himself, if it is bother, to find out by means of a meter,

whether the only exposure which he can give can yield a printable negative. Or perhaps he thinks that by some chance, in spite of what the meter tells him, he may get a properly exposed plate.

Some do not use an exposure-meter because of some disbelief in its reliability. We have known two meters tested against each other; and because the tester obtained discordant results, he concluded that the instruments were not good. The difference was really due to differences in the way the meters were used. One cannot go from one type of meter to another type and expect to get identical readings without a little practice; although the very first time a meter is used, by the most unskilled worker, he will get a result far nearer the mark than he could hope to reach by mere guessing.

It must not be forgotten that there are little differences in the way a meter is used: there is room for the personal equation in judging the character of the subject, for instance, and the light which the meter should be used to measure. Different workers will do this differently; but every exposure made with its use is a check upon the method of working with the meter;



COMING FROM SCHOOL

HENRY A. HUSSEY

THIRD PRIZE—RAINY-DAY PICTURES

and very soon the photographer follows a routine which subsequent development shows him may be relied upon implicitly.

It may be as well if we also point out, for the benefit of the beginner, that two different exposures may both be correct. In other words, the correct exposure in any given set of circumstances is not one definite time and no other, but a period. Moreover, this period varies according to the character of the subject. With a subject with a very wide range of gradation, the longest correct exposure may not be more than three or four times the shortest correct exposure; with other subjects one may give thirty times or more and still be correct.—*The A. P. and P.*

Testing the View-Finder

THOSE who use a hand-camera, and particularly when the instrument is one of the smaller type fitted with a so-called brilliant view-finder, will do well to test the accuracy of the latter from time to time. When only distant objects are being photographed, any slight inaccuracy of the view-finder is a matter of little moment. But when the subject is comparatively close, the photographer will do well to

be sure that the image that appears in the finder is approximately the same as that included by the lens. On many hand-cameras the position of the view-finder must of necessity make for inaccuracy, though this is often not so great as it may appear. A good plan is to test the relation between the finder and camera as follows:—A light wall should be chosen, and four pieces of black card should be fixed to this to form the corners of a rectangle, let us say, about four feet by three. The camera is set up upon a tripod or other firm support, about eight or ten feet away, and so directed that the cards are exactly in the four corners of the view-finder. A glance at the focusing-screen (for if the camera is of the film-pattern one may be extemporized, or a film exposed) will then indicate to what degree the finder is incorrect. It will generally be found that the finder tends to include more than actually appears upon the screen, and in this case the defect may be remedied by painting out a portion of the glass of the finder with a fine brush charged with a little Brunswick black or cycle-enamel. When a change of lens is made, for one including a different angle of view, the same test should always be made before actual work is commenced, thus avoiding possible disappointment.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



"FEAR NOT, LITTLE SISTER!"

DR. D. J. RUZICKA

Advanced Competition—Shore-Scenes Closes August 31, 1920

It matters little whether the camerist selects the subject for this competition as he wanders along some quiet trout-stream or whether the shores of a mighty ocean furnish the requisite pictorial material. The important point to remember is that it must be a shore-scene; and, unless it is one convincingly, the jury will not view it with favor. Technically, the present competition is filled with interest. The matter of correct exposure and attractive lighting offers the worker as much opportunity for thought as does the artistic composition of the picture. Also, the use of a suitable ray-filter may engage the contestant's attention to advantage. In short, we have a competition that will be a fair test of the camerist's photographic ability in a slightly different direction than usual.

It is well to remember that in making shore-scenes it is often better to emphasize one striking object such as an old pine-tree, clump of reeds or ledge of rocks. It is a natural tendency for the worker to be eager to include all that he possibly can of a beautifully curving shore or broad expanse of bay; but, unfortunately, the completed picture is apt to be disappointing. The curving shore which seemed so attractive to the eye is very apt to be reduced to such small proportions that

the beauty of the scene is lost entirely. I mention this point because I have made this very mistake many times and have yet to obtain a satisfactory result. Of course, if the photographer is equipped with a large view-camera and can use the single element of a symmetrical lens, he may obtain a picture commensurate with the time and labor involved in carrying such an outfit about. However, most camerists to-day do not use an outfit much larger than the popular postcard size; and these cameras are not usually fitted with symmetrical lenses. Neither have such cameras the requisite bellows-extension. In most cases, it will be well for the average camerist to confine his activities to a subject that may be photographed to advantage with the particular equipment that he possesses.

The frontispiece, "Lake-Birches" by Amos A. Falls, in May PHOTO-ERA is an excellent example of a good shore-scene. The artistic strength of this picture lies in its simplicity. As I have said so many times, the greatest masterpieces in art, literature, music and photography are the simplest. A boat pulled up on the shore of a lake or pond has great pictorial possibilities. The activities of the amateur or professional fisherman, yachtsman, and canoeist, can be utilized with profit. Then, there are the campers and the summer-vacationists to turn to for good material that is filled with action and is often

spectacular. It is for the individual worker to decide what part of the varied material at his disposal he will select. To a certain extent he will be governed by his environment; and, often, he may be obliged to make the best of a subject that he would not choose if another, more to his liking, were available. However, there are virtually no shore-scenes that do not possess pictorial beauty if the camerist is trained to detect it. The remarkably spectacular effects obtained by H. C. Mann with only a sand-dune and a few clouds to work with, is a case in point.

It is of distinct advantage, at times, to be able to row or paddle slowly along the shores of a river, pond or lake with one's eyes and mind keenly alert to seize upon pictorial material, that may present itself at any moment. In my own experience, I know that such a procedure often results in obtaining an effect otherwise not to be had. I recall one incident that will help to make clear my point. On a certain large lake there was a point of land and on the end of the point stood an old, gnarled scrub-pine. On each side of it were tremendous boulders and ledges of rock. If one walked out to this pine-tree there was little of pictorial beauty to be seen. If one rowed out to one side of the point, the composition still fell short of being satisfactory. However, if one rounded the point and approached the old tree from the other side, there was a picture of marvelous beauty and attractiveness. It is for the intelligent camerist to make haste slowly, at times; and to make sure that there is not a better view-point to be obtained than the one first selected.

Perhaps, some of the best examples of the shore-scene, as it may be used by the pictorialist, are found among the masterpieces by Bertrand H. Wentworth. Those camerists who were privileged to see the exhibition of Mr. Wentworth's pictures held at the gallery of the Society of Arts and Crafts, Boston, during two weeks last March, were given convincing proof of the adaptability of the shore-scene to the highest artistic requirements. With masterly skill, Mr. Wentworth often photographed his subjects under conditions of weather which were most unpromising technically. The rugged coast line of Maine offers countless opportunities to the camerist who has "eyes to see, and ears to hear" the beauty and the dramatic appeal of nature. As I have said before on this page, if the photographer himself is not in sympathy with or inspired by the subject before him, it will be a difficult matter for him to make the beholder of the finished picture sympathetic or inspired. In a sense, the camerist is like a musician. We have all heard the technically perfect playing of a piano or a violin-soloist; and, yet, we have come away dissatisfied. On another occasion we have heard the very same compositions played by others and we have been stirred deeply and have come away satisfied and exhilarated by the music. In the former case we have cold, hard technique—perfect, to be sure, but without a heart. In the latter case the technique may not be faultless; but there is life, love and a heart in the playing that sweeps all before it and we acclaim the musician to be a master. So it is in a great measure, with the amateur or professional photographer. Whatever of the deeper, finer emotions of the heart he puts into his picture, he will usually find reflected in the mind and heart of the beholder.

One of the most attractive subjects in this competition, and one where the human interest plays the chief part, is children frolicking on the shore of a lake or the ocean. Contestants need only look through the pages of PHOTO-ERA, of any one year, to find any number of pretty scenes as I have suggested. The prize pictures in the Shore-Scenes Competition, held nearly every

year, and long before I became connected with the Editorial Staff of this Magazine, will offer many charming scenes of children playing on the beach, or beautiful girls reclining gracefully in the sunshine. Almost any active human interest is worth considering.

As I have already pointed out, the technical skill involved in the making of shore-scenes offers the camerist an opportunity to work out an entirely different set of rules for correct exposure, use of equipment and finishing. The problems that confront the photographer in making snow-scenes, genres, still-life and speed-pictures are not exactly the same in the case of shore-scenes. An important fact to remember is that the sun is more actinic than it was several months ago. Also, that water reflects light to a remarkable degree, even in cloudy weather. Pictures made in and around boats usually require comparatively short exposures because most canoes, rowboats, motor-boats and yachts are light in color inside and outside. Then, most persons—if any are to be included in the picture—are dressed in white or in light-colored apparel. In certain cases, a ray-filter is of great advantage; and, in others, it has a tendency to accentuate or over-correct values. Most plates and films are sufficiently orthochromatic to meet average requirements; and, unless the worker is skilled, he will do well to avoid a too frequent use of a ray-filter. A small lens-stop is usually required to avoid excessive overexposure. However, the speed of the shutter is also an effective means to control the light. In short, it is the harmonious co-ordination of lens-stop and shutter-speed that will bring the best results with regard to exposure. It is virtually impossible to lay down definite rules, as conditions vary so greatly. Moreover, the ambitious worker will welcome the opportunity to make his own experiments and work out his own methods to fit the conditions that exist about him.

It may not be amiss to caution the camerist to take every precaution to keep his outfit protected from the effects of dampness—especially the salt air from the ocean. There are few cameras that are made to withstand the effects of dampness and, unless care is taken, the leather-covering, bellows, shutter and even the lens may suffer permanent injury. What I have said applies as truly to plates, films, papers and chemicals. Those workers who expect to spend considerable time on or near the water should provide themselves with one or more large tin boxes that have an air-tight cover. Then all sensitized material should be kept in these boxes until required. A stout, leather carrying-case for the camera is a positive necessity for protection from the weather and from unexpected knocks. The more time and money the camerist has put into his photographic venture, the more care he should take to see to it that he receives an ample return on his investment. This is good business and it is good photography.

It would seem that this competition is especially timely and that there should be a ready response from our many subscribers and friends. From many letters that we receive, we learn of the tremendous amount of benefit that these competitions have been to amateur and professional photographers. Moreover, we know that they are followed eagerly by many readers in all parts of the world. For this reason, it is of great importance that each contestant read the rules carefully and that he bear in mind the suggestions here advanced. There is no doubt that this year's competition should exceed in interest and in the number of contestants that of any preceding year.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. **Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, sent SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.**

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of **stiff corrugated board—not the flexible kind, or with thin wood-reveer**. Large packages may be sent by express.

Awards—Beginners' Competition Closed April 30, 1920

First Prize: Ruth M. Weiss.

Second Prize: George F. Hogan.

Honorable Mention: James Dooley, John J. Griffiths.

The Beginner in the Country

In this article I am going to use the term "country" in the sense which includes the seashore, farming-communities, lakes and mountains. In short, if the beginner is not in the city, he is somewhere in the country; and, in all probability, he intends to make the most of his photographic opportunities. Those who have read these little articles, from month to month, are aware of the importance I attach to the mastery of one's equipment and the need of determination to get the most out of photography. Another step is to so conduct one's self as an amateur photographer that disinterested persons will be led to admire and respect the user of a camera. By this statement I do not mean to imply that camerists as a body are looked down upon by the general public; but I do mean that the goodwill of the public is a great asset to amateur and professional photographers. Perhaps, I can make my point clearer by citing an incident that came under my observation.

In a beautiful New England town there was a gentleman of wealth and culture who loved all the flowers, birds and animals. He bought a large tract of land and built a magnificent estate. After several years of effort and the expenditure of thousands of dollars, he obtained his heart's desire in the shape of a veritable fairyland in which flowers, birds and animals were guarded zealously from harm. Many friends came to visit this gentleman, and all agreed that it was too beautiful a spot to be barred to the public which ought to be permitted to enjoy it with the owner. After repeated requests, the owner consented to open the grounds to the public on certain days. All went well for a time, until the gardener noticed that certain rare flowers had been picked and that carefully trimmed walks had been disfigured by paper-cartons that had contained roll-films, and by paper-tabs from film-packs. The owner regretted these evidences of thoughtlessness, but still kept his grounds open. As a gentle reminder, he had several signs set up which requested the co-operation of the public to keep his beautiful estate free of defacement and damage. No more flowers were picked nor were there any further signs of damage; but the paper-cartons, tabs and tin-foil still littered the walks and drives—conclusive proof that amateur and professional photographers failed to appreciate the fitness of things. The result of this continued annoyance was that the owner decided to close his grounds to the public and that his opinion of photographers bordered on disgust. Needless to say, every photographer that visited these grounds did not throw cartons and paper about; but in this case—as in hundreds of similar ones—the innocent have to suffer for the guilty.

It is my belief that no regular reader or subscriber of PHOTO-ERA would intentionally mar the beauty of any garden or park; and I doubt very much that pho-



THE LONE CEDAR

RUTH M. WEISS

FIRST PRIZE—BEGINNERS' COMPETITION

tographers as a body are given to such thoughtlessness. However, facts are facts, and the beginner will do well to help create a favorable impression wherever he goes by taking pains to avoid any act that may reflect on the good name of photographers.

A visit to places of historic or scenic interest will bear out my contention that greater care should be used to avoid littering up the immediate vicinity with evidences of the presence of the camerist. A short time ago, I stood before a beautiful waterfall, and as my mind and heart drank in the grandeur of the descending, foam-flecked water amid its setting of towering cliffs, my eyes chanced to fall upon the immediate foreground. There—literally in heaps—lay cartons, tabs, tin-foil and other evidences of the thoughtlessness of some camerists. It is no exaggeration to say that this sight spoiled an otherwise perfect scene of natural beauty. It would require so little effort to throw cartons and papers away at some place that would be inconspicuous or, better still, carry them home.

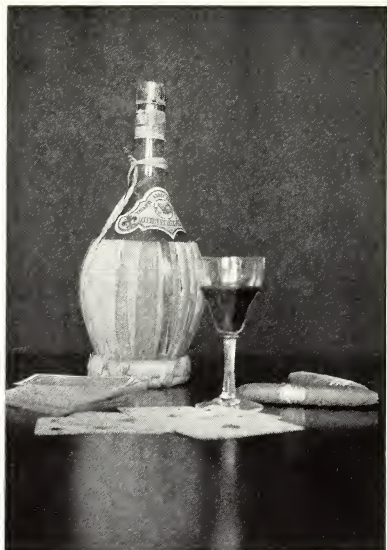
Another point I am led to mention because of actual experience, is the one of personal relations with persons who are strangers, and who are not especially interested in photography. I do not blame any beginner for feeling enthusiastic about photography; but it does not follow that strangers that he meets will share his enthusiasm. Every camerist will attain his ends to better advantage if he respects the wishes of others and by quiet diplomacy achieves the results he is after.

This suggestion applies to cases where it is necessary to obtain permission to make pictures. Wherever a photographer makes photography respected, he is making it that much easier for other camerists to follow and make good. The owner of a Brownie is just as much a photographer as he who uses an expensive reflecting-camera. My plea is to make any person that carries a camera a person who is entitled to every courtesy because he is a *photographer*. To attain this desirable end, each beginner must do his share and do it with a will.

During a vacation the beginner will have many opportunities to make or break the opinion that strangers may have with regard to photography. No matter how courteous he may be or how careful with regard to throwing cartons about, if he cannot make a good picture he has lost another opportunity to leave a good impression of photography. Unless a beginner is equipped technically and artistically to make a good snapshot, he should not go through formalities or inconvenience others to get permission to make pictures.

Let every beginner as he leaves for the seashore, lakes or mountains make a resolution to uphold the "ethics" of the art and science of photography. In so doing, he will help build up the name of photography among those who know little about it, and he will also find that he will enjoy his camera-work in full measure. That is worth while; isn't it?

A. H. B.



EMBLEMS OF GOOD-FELLOWSHIP HENRY A. HOGAN

SECOND PRIZE—BEGINNERS' COMPETITION

Negatives for Enlargement

A GREAT deal of work in the finishing of enlargements would be saved if a little more care were exercised in the production of the negative, suggests *The British Journal*. A good average negative direct from nature, if enlarged upon suitable paper, will give a result which requires little more than spotting, but unfortunately most enlargements have to be made from copy-negatives, and these often leave much to be desired. As a rule, such negatives are thin and lacking in contrast, and this we believe to be due to two principal causes: the use of a rapid plate and insufficient development. Underexposure is another common error in copying, and this is often due to not making allowance for the yellow tint which forms the basis of nearly all old photographs. A clean-looking negative, even if rather thin, will usually give a good enlargement, as any small portions of clear glass in the shadows seem to have more effect on the contrast than they do in contact printing. It is a good plan to use a non-staining developer for negatives for enlargement, as the color of pyro-negatives varies, and it is very difficult to allow for this by artificial light. In some cases two negatives will appear identical when viewed by the light of a filament lamp, but when compared in daylight it will be seen that one is much yellower than the other, and needs perhaps three times the exposure.

Shutter-Inefficiency

MANY photographers often do not pay as much attention as they might towards obtaining the greatest efficiency with between-lens shutters. It needs to be pointed out that, in order to get the full advantage of a large-aperture anastigmat lens, the shutter-aperture should be no smaller (preferably larger) than the diameter of the widest working-aperture of the lens. Lack of attention to this point has no doubt caused many a fine anastigmat to be condemned as lacking its marked speed. Some time ago, we were asked by a certain amateur worker why his F/6 lens gave identical results in the matter of exposure at full aperture as when stopped down to F/8. Suspecting the cause of the trouble, we examined the shutter, and investigation proved that the shutter-aperture was almost identical with the F/8 aperture of the lens. Further questioning elicited the fact that the worker in question had purchased his new F/6 lens, and had had it fitted to his old shutter that had been capable of effective work in conjunction with a lens working only at about F/7.7. A new camera fitted with a lens and shutter by its maker may be regarded as correct in this respect; but among secondhand apparatus, that may have been altered or modified by previous purchasers, the buyer should be on his guard against inefficiency from this cause.—*British Journal*.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Measuring Inaccessible Heights with the Camera

To measure the height of church-spires, buildings and other inaccessible subjects, and with a fair degree of accuracy, is a simple matter and can be accomplished by any photographer equipped with a view-camera. With reasonable care, the error should not exceed two per cent, which is decidedly more accurate than guess-work.

The camera is set up on a level with, or slightly above the level of, the base of the subject; at a distance of not less than one hundred feet, or at such distance that the lens used will be focused at infinity. Carefully level the camera and focus the image on the groundglass, noting a prominent point on the subject that coincides with the horizontal center line on the groundglass. KEEP THIS POINT IN MIND.

It is now permissible to raise the lens-board, if necessary, to include the entire subject. With a rule having small graduations, measure the distance in inches on the groundglass, from the top of the subject to the point previously found to be on a level with the camera. Divide this distance by the focal length of the lens, in inches. The result is the tangent of the angle of view, subtended by the subject, which will be a decimal except in the case of very wide-angle lenses.

Measure by pacing or more accurately if desired, the distance from the camera to the subject; multiply this distance, in feet, by the tangent of the angle as obtained. The result is the height in feet, from the top of the subject to the point on a level with the camera, to which must be added the height from the ground to the point level with the camera.

To illustrate: Height of image on groundglass from top to point level with camera, $4\frac{1}{2}$ inches, focal length of lens, $8\frac{1}{4}$ inches; distance from camera to subject, 150 feet; height of point level with camera, above ground 5 feet. Therefore,— $4\frac{1}{2}$ divided by $8\frac{1}{4}$ = .545

$$150 \times .545 = 81.75$$

$81\frac{3}{4}$ plus 58 = $86\frac{3}{4}$ or 86 feet, 9 inches, total height.

EDWARD B. MALLORY.

Green Tones for Bromide and Gaslight-Prints

AMATEURS who may be desirous to produce green tones on bromide and gaslight prints, will find the method described by H. F. Westwood in the *Amateur Photographer* of interest. "Gaslight or bromide prints, and, no doubt, lantern-slides, are suitable material; and they should have been thoroughly washed after fixing. The color obtained with bromides agrees very well with that of grass and green foliage; with gaslight prints, it is somewhat brighter, more like the current $\frac{1}{2}$ d. postage stamp.

The print is bleached in a sufficiently strong potassium ferricyanide solution, which should be stronger than in the ferricyanide and bromide bleacher for sulphide toning, as the action is slower. It is then washed, preferably in several changes of still water.

Insufficient washing leads to blue whites. The next operation is toning, carried as far as it will go, in the bath given below, and the print is finally washed in a few changes of distilled or acidified water.

To make the toner, a solution of sodium sulphide of a strength such as is used for sulphide toning has added to it—stirring the while—enough of a strong solution of ferric chloride to remove the smell of the liquid. More or less does not much matter. To this sufficient hydrochloric acid is added to dissolve up the black precipitate. Excess of acid will do no harm. The solution is used as it is.

The process is cheap, the materials readily obtainable, and the results, as far as I know, are permanent, as the image consists of a silver sulphide and ferric ferricyanide."

Instantaneous-Shutter Testers

ON page 38 of the *Photographische Industrie* for 1920, is a description of an instantaneous-shutter tester, sold by the firm of Carl Janzer, of Dresden, under the name, "Columbus Camera-Shutter Speed-Tester."

The method in question corresponds to the one described by Dr. Schrott, in the October number of our journal, and is based on the stroboscopic analysis of a vibrating column of air produced by a tuning-fork. Exact results are to be obtained, by this method, only in the case of curtain-shutters. The application of this method to lens-shutters has already been described by Sir W. Abney, in Eder's *Jahrbuch* for 1894 and for 1912. It is not to be regarded as entirely reliable, however, as, in the case of sector-shutters, the function represented by the dependence of the amount of lens-surface actually exposed, upon the time of exposure, is not known, and can never be definitely determined by means of this method. On the other hand, this procedure may be relied upon, in the case of compound Iris-shutters.—*Photo-Korrespondenz*.

Control of Contrast on Bromide and Developing-Out Paper

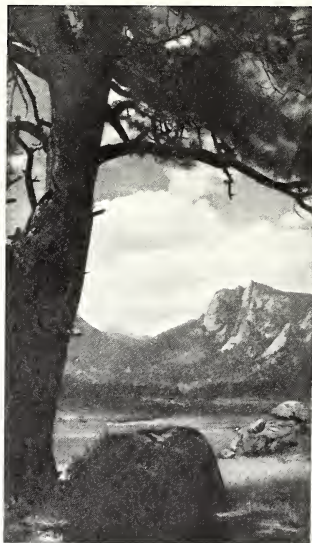
SOMETIMES one has to print from a contrasty negative, which for one reason or another, it is not desired to submit to a per-sulphate reducer beforehand, and the softest grade of paper on hand fails to produce a satisfactory print. In such a case try the following:

Prepare a 10% solution of ammonium bi-chromate (potass. bi-chromate can be used instead by making it alkaline with ammonia), and add thirty drops of this stock to 16 ounces of water in a perfectly clean tray. Expose the paper three to four times as long as usual, then soak in this bath two minutes, taking care that every part of the surface is acted upon, wash in several changes of clear water and develop as usual, only allow more time for the image to appear, since the bi-chromate has a restraining-action. It is better not to use the same developer a second time. If the result is too flat, reduce the amount of bi-chromate and lessen the time of exposure; or, if still greater softness is needed, increase both the exposure and strength of bath.

W. S. DAVIS.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

A WELL-COMPOSED picture. For a wonder, the further cow is not walking *out* of the picture! The girl doing the milking is the only possible blot in the picture; for, although she is deeply engrossed in her work—and not, at the moment, looking at the photographer—she offends, from an artistic viewpoint, by her solid white cap, and her solid white dress only partly covered by overalls. How perfectly easy for the dairymaid to have worn a cap and dress of neutral color! The cow's tail is a-switching; but, fortunately, does not appear to have disturbed the fair maid drawing the lacteal fluid. The exposure was made just in time! The offending end of the cow conveys a feeling of motion, otherwise it would be sharply defined.

While the setting of the picture is good and agreeable in tone, and one observes a sense of harmony in the ensemble (barring the faults in the dairymaid's appear-

ance), one can detect *two* pictures, viz., one at the right, and another including the other cow. To reduce this feeling, the numerous distracting white spots surrounding the cow should be subdued, by working carefully on the negative. In that case, the details of the supplementary picture would quickly disappear. Finally, the merits of this picture greatly outweigh its faults.

W. H. NELSON.

THIS picture is decidedly lacking in artistic interest. Milking and other more or less homely operations should be presented in a most attractive way, or the picture will fail to make a personal appeal and give one the impression that it is the result of a chance snapshot. In this case, the cow under consideration is presented to our gaze in a most unæsthetic way. The blur, caused by the switching of the cow's tail, is only too obvious a fault, and could have been avoided. The second cow seems to be walking off thoroughly disgusted with the whole affair. The quality of light is good. If a little more thought had been given to the element of harmony of parts, the result might have been less prosaic.

C. K. NILES.



THE PICTURE CRITICIZED THIS MONTH

THE chief cow is too tall for the picture-space, making her appear of enormous size. The camera was so near that the cow appears deformed—taller than long, also making the further one too small. If about six to eight feet more of the scene at the left were included, the cows would not *appear* so far apart and the composition would pull together better. A conspicuous defect like the blur of the switching tail utterly ruins any picture. The hocks and feet of the near cow are too much in evidence and, with the blur of the tail, are the most attracting and distracting things in the picture. From my experience with clumsy cattle, I should advise the milker to *not* sit snuggled in that narrow space between the cow and side of barn. Point of view poor.

WILLIAM H. BLACAR.



To criticise.—To examine and judge as a critic. A Critic.—One skilled in judging the merits of literary or art-workers.

The following is my *opinion* of the picture of "Two Cows and a Maid." It is a fair example of unposed subjects, exposed by an artist (?) with an imagination that all things are beautiful. Some things are far from being so, and the "south-end" of a cow is, in my estimation, most remote. It is an excellent study, however, of conditions as may be in evidence during a day in August. The posture of the cow in the background, the ringlet of Rebecca's hair and the apparent appreciation of a little shade, together with other smaller details, are typical of hot weather. It is a successful picture of an uncomfortable day, that's all!

J. HAROLD CHASE.

THE first thing that strikes the eye is the badly composed group in the foreground. One sees first the conspicuous costume of the dairymaid, the cow's feet and—well—the blurred end of the cow's tail and her feet. The head, unfortunately, is not visible. The other cow, waiting her turn to be milked, or having already yielded her supply, is facing the right way, for which the photographer should be praised. The faults mentioned could easily have been prevented, by care, patience and change of poses. The setting and lighting of the scene are admirable, although the background, at the left, is spoiled by detail that could have been modified greatly, if the photographer had applied some skilful retouching or etching.

HAROLD A. FISKE.

Frank and Kindly Criticism

THE Editor takes this opportunity to suggest that contributors to this department make their criticisms constructive, rather than destructive. Every serious picture-maker appreciates the difficulties that frequently confront him. He knows by experience that he has often overlooked, in his picture, features and objects which, in the finished print, appeared as blemishes. Sometimes these faults are not noticeable until pointed out by some one else. For this reason, the contributing critic should be generous in his praise of the merits, and deal lightly with the shortcomings, of the picture which he has been invited to criticize. It is assumed that he himself is a photographer of ability.

This is true, particularly, when analyzing portraits or genres. The camerist who submits a picture in which his wife, sister, or child appears, trusts to the kindness of his critic.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



WE ask no apology in offering our readers an honest attempt to simulate a moonlight by means of one color. A proof of this month's cover-page was submitted to a group of eminent artists gathered at the Boston Artist Club recently, and elicited their unanimous approval. It may be well for our readers to compare the result with the reproduction on page 23 and to declare their preference. The theme is one of simple artistic design and genuine pictorial beauty, and is calculated to arouse the imagination of the poetically inclined. The quotation is suggestive and appropriate. Data: September, 6 P.M.; 1/5 second; No. 3 F. P. Kodak Special ($3\frac{1}{4} \times 4\frac{1}{4}$), fitted with $5\frac{3}{8}$ -inch Zeiss Tessar, series 2b; stop used, F/6.3; Kodak color-screen; Kodak film; pyro-metol in tank; ordinary semi-mat print.

Too much, with respect to artistic composition, must not be expected from Dr. Pardoe's photographs of nature-subjects. To produce well-executed records would seem to be a task of sufficient difficulty. This has been accomplished with conspicuous skill. And yet rare judgment has been shown in selecting admirable positions of the various subjects he obliged to pose to his magic camera. But with regard to subjects in repose, Dr. Pardoe showed the possession of true artistic ability, which he exercised in an eminent degree in "Indian Pipes," the frontispiece, and in "Born Again," page 16, than which nothing finer has ever graced the pages of this magazine. Details as to the making of these two pictures will be found in the course of his narrative, "In Nature's Studio," pages 6 to 22.

I read somewhere, recently, that John Paul Edwards, the much-admired photo-pictorialist, has changed his manner of artistic expression. I have not yet seen any example of his new method of interpreting a pictorial subject. Whatever it may be, I doubt very seriously that it is in his power to surpass the exquisite beauty of "Decorative Landscape," page 25. With quiet dignity and graceful simplicity the beautiful tree dominates the modest landscape, itself resting beneath a sky that expresses celestial harmony. The entire scene is so restful and exalting as to suggest a beautiful chord in music, and our hearts go out in gratitude to the author of this beautiful creation.

The picture by William D. Kelly, page 26, speaks to us directly and frankly of wanton destruction of a sacred edifice. Whatever may have been the enemy's object in demolishing this once beautiful temple, may never be revealed. The original print was sent to the Editor by the camerist, from France, several months ago, as evidence of real conditions as they exist, and as they will be viewed by the peaceful army of American tourists this summer. Data: Albert, France; R. B. Graflex, B. & L. lens at F/11; 1/20 second; standard Orthonon; print on Argo paper.

In pleasant contrast to the sad picture of devastated France, is the series of delightfully pictured sand-dunes of New Jersey. The photographer, John S. Neary, has made a specialty of studying and depicting these picturesque mounds of sand, with the result that in the photographic exhibition held in the School of Industrial Arts, in Trenton, last April, he was awarded the grand prize, for a collection of these sand-dune photographs, which included the four subjects shown on pages, 28, 29 and 30. The casual visitor to the local-

ity pictured so vividly by Mr. Neary—unless gifted with artistic perception—would hardly suspect that these prosaic-looking objects were susceptible to spectacular transformation by the camera in the hands of an artist like Mr. Neary. But let the skeptic read the latter's story and view his pictures! Data: After 4 P.M.; bright sunlight; clouds overhead; $6\frac{1}{2} \times 8\frac{1}{2}$ view-camera; medium ray-screen; 1/10 second; Ortho plate; pyro; contact Cyko-print. Other details in the text.

Advanced Workers' Competition

WHEN Editor Beardsley wrote his plea for active interest in the "Rainy-Day Pictures" competition, he suggested a subject that could not fail to appeal to camerists filled with a desire to produce something original, although the themes that were enumerated are, in themselves, common occurrences on any rainy day in the city. But, few—very few, indeed—of such topics were found pictured in the rather large collection of entries that was placed before the jury. Excuses? Of course, there were excuses, and they were of the sort we had not anticipated. Wrote one disappointed correspondent, "It was raining cats and dogs, one day. As I looked out of my office-window, I noticed a newsboy trundling along, his coat-collar turned up, his cap down over his eyes, a bundle of papers done up in a rubber-cloth, rain streaming from his clothes, and splashing along the muddy street—the very thing for Photo-Era's Rainy-Day Competition! Then an Airedale trotted along, shortly after, dripping from the rain—another likely subject. But where was I? To be sure, I had my outfit in the next room. I got it ready, went out, and looked for the subjects I had seen fifteen minutes before; but found none. Perhaps, I was not what you call resourceful." Another correspondent wrote, "Whenever there is a downpour, I find I left my camera at home. Then I bring the thing to the office, the next day, and wait for weeks and weeks, but no shower—no subjects!" Still another interested camerist remarked, "With many interesting camera-subjects getting by me, I think I'll become a policeman. Then with a 'loaded' F. P. K. in my other hip-pocket, I'll be always on the job." However, not a few of the entries were wholly admirable, though there was a lack of variety. The competition was not entirely disappointing.

"Dejected," by D. R. Battles, has been done before, but scarcely better. The portrayal is convincing, and there is a deal of sympathy for the lonely cobbler. The team is well placed, the perspective is good, and the general wet effect and gloom are capital—a masterpiece, indeed! Data: October; dull, raining, 11 A.M.; Eastman Film-Pack, $2\frac{1}{4} \times 3\frac{3}{4}$; $4\frac{1}{2}$ -inch Ross-Zeiss Tessar, series Ic, F/4.5; 1/25 second; Hydro-metol; enlargement on Artura Carbon Black Grade D.

The scene changes to one of prosperity and style as the eye penetrates the slight mist, and looks along the city-street with electric lights on each side. The impression of a wet night, and the attendant atmosphere, has been interpreted with admirable skill by our Japanese pictorialist, M. Sugimoto. Data: July, 1919,

8 P.M.; No. 3-A Kodak; 6-inch B. L. Tessar, F/6.3; 10 seconds; Eastman film, tank-development with Pyro; enlargement made of part of negative with Struss Pictorial lens, on Eastman's Royal Bromide.

Another street-scene offers human interest on a rainy day—a group of children on their way to school. Umbrellas are up—no make-believe, it is raining! The camerist caught the view at a propitious moment, so that the grouping is absolutely spontaneous—unstudied, yet pleasing and artistic. The proportions of the picture and the general tonal effect are exceedingly good. Data: March, 1918; 3 P.M.; Goerz 6 x 9 cm. camera, fitted with Tessar Ic, F/4.5; film-pack; metol-hydro; 1/50 second; enlargement on P. M. C. No. 7; Serchol-Hydro.

Beginners' Competition

DESPITE several technical faults, "The Lone Cedar," page 39, is a picture of pleasing artistic qualities. The chief object occupies a favorable position in the picture-space and is relieved against an interesting sky. The tone-values, too, are admirable. The rather uneven definition, with the sharpest focus placed at the farthest visible end of the fence, and the woolly effect of the left and the near parts of the picture, together with the dark corners, would seem to indicate that the optical part of the camera was out of order. Darkened corners usually indicate that the lens does not cover the plate, or that the lens has been raised or lowered too much. The cause of the uneven illumination and distorted definition in Miss Weiss' picture should be investigated by an expert, because technical work of the nature described is not fair to the artistic ability of the owner, or to the high reputation of the maker, of the camera. Data: April, 2:30 P.M.; $3\frac{1}{4} \times 4\frac{1}{4}$ Ruby Reflex camera; Cooke lens, at F/4.5; 3-time ray-filter; Iso Medium plate; Prof. Cyko Medium.

"Emblems of Good Fellowship," page 40, is an interesting composition, though the theme may be open to criticism. On the whole, the arrangement of the various objects is not at all bad; but the color-values do not appear to be correct unless the cigars are enclosed in tin-foil and the straw-covering of the bottle of Chianti is unusually light in color. Data: Bright light; April 11, A.M.; Ica Trix ($3\frac{1}{4} \times 5\frac{1}{2}$ in.); $6\frac{1}{2}$ -inch Ilex Anastigmat, F/6.3; at F/16; 20 seconds (interior); Premo Speed-Pack; Eastman M. Q.; Velvet Velox Special print.

Our Contributing Critics

THE picture to be analyzed this month is by a camerist who has a marked sense for scenic beauty, but one who does not profess to be an expert in the art of pictorial composition. His subject is entitled "Black Canyon." Data: August; postcard camera; lens used at F/16; 8-time ray-filter; 3 seconds; Standard Ortho; pyro, in tank; Artura contact-print.

To Participants in Our Competitions

ALTHOUGH nearly every reader of PHOTO-ERA reads the magazine from cover to cover, there is an occasional one who is not so thorough and thereby misses something useful. Participants in the monthly competitions should make it a point not to miss the advance suggestions regarding the subject of each competition—how to treat it successfully and profitably; otherwise some of their efforts will be wasted. This was true of the "Rainy-Day" Competition, where participants were warned against using hackneyed subjects. Yet many were made, and to no purpose.

Observing the Rules of Competition

It is a source of much regret to the Publisher that contributors to PHOTO-ERA monthly competitions are not always as careful as they might be, to observe the rules that govern these contests. Were they to realize the large amount of extra work that they thoughtlessly put upon the Publisher, as a result of serious omissions in their data, they would surely take the pains to give complete information in answer to fundamental and indispensable questions.

In connection with the "Miscellaneous" competition, which was held in May last, a number of prints were received without any data, whatsoever. In some cases, indeed, prints were not marked even with the name of the maker; and, in several instances, there were other evidences of haste, oversight and negligence. Thus we have a number of prints totally devoid of any clue to their source.

This practice is not dissimilar from what is noticed in the Post-Office Department, where thousands of letters accumulate each month, bearing no superscription or postage-stamps, and without any information as to the sender. Not being aware of these shortcomings on their part, the senders of such letters are quick to condemn the Post-Office Department, on the score of its assumed negligence and its lack of adequate service.

The Publisher hopes that contributors, who may have felt in a similar way, will be more lenient when they are disposed to regard him as guilty of negligence or oversight, and not be too quick to charge him with being remiss, when, in reality, it may be that they have not thought to observe the rules, in one particular or another. Their attention is invited to the rules—simple enough for any one to understand—which are printed fully and regularly each month, at considerable expense, and for the eminent benefit of those who wish to participate in PHOTO-ERA competitions.

A Unique Bath

THOSE of our readers whose newspapers do not contain the syndicated cartoon, "That Son-in-Law of Pa's," by Wellington, may be interested in an episode, illustrated by the artist, that has a photographic theme.

In Scene I, Cedric, the son-in-law of tardy comprehension, gently objects to "Fawther" entering the bathroom, saying: "But really you CAWNT use the tub just now, old top, I —" Strenuous objection by "Fawther."

Scene II shows "Fawther," towel in one hand and flesh-brush in the other, pushing Cedric aside and rushing into the bathroom, while the bewildered Cedric protests—"But I've prepared the bawth foah!"

Scene III. Loud voice from within the bathroom: "Why, th' Sam Hill did they put this red globe in here, I wonder? A body can't see t' find th' soap!"

Scene IV. Protruding from the partly open door of the bathroom, are seen "Fawther's" head and shoulders, of inky blackness, the dripping face expressive of uncontrollable rage, and suggesting speedy revenge; while from an adjoining room comes the voice of the innocent culprit: "Yes, mothaw, he's bathing in it now! I tried to tell him I'd prepared the tub to develop my kodak-films in; but he wouldn't listen!"

A Versatile American Statesman

SIR: You may be interested to learn that, according to a news-letter sent out by the Goodyear tire people, Daniel Webster was the compiler of Webster's dictionary.



ON THE GROUND GLASS

WILFRED A. FRENCH



A Requirement of a Camera Club

I RECEIVED from a correspondent the following epistle:—

"Dear Editor. You must receive frequently letters from amateurs requesting advice how to form a camera club. One has been formed recently in our town of fifty-two thousand population. The membership comprises men above the average intelligence; but not one of them can prepare a well-written lecture on any given photographic topic. Nevertheless, there is a future for the Pyro-Soda Club of my community; for I shall not only join it, but devote a large part of my leisure-time to the careful study of six bound volumes of PHOTO-ERA given me as a wedding-present (last March). Naturally, I shall try to become an acceptable pictorialist which, with your wise counsel, ought not to be impossible. Then, by next season, I hope to be announced as one of the clubs' lecturers. Rest assured, moreover, that there will not be any slips in grammatical expression, such as you have pointed out, from time to time. Of course, the main thing is meritorious material.

SILAS COBB."

Voigtländer—not Voightländer

It is passing strange that many well-meaning people should insist on introducing an *h*, in writing the name of Voigtländer, the great optician who constructed the first portrait-lens. This was in the year 1841, according to the formula of Joseph Petzval. The firm of Voigtländer also constructed, in 1858 and after Petzval's calculations, the orthoscopic lens for landscape-work and for copying. The firm, on its own account, computed and constructed the Euryscope and the Collinear—surely, enough optical performances to ensure it a place in the photographic Hall of Fame. And yet, even owners and users of these well-known camera-lenses seem to be unable to write the firm's name correctly, and insert an *h* where none is needed.

Prefer the Camel-Hair Brush!

CAN I believe my eyes? A writer—doubtless an experienced and well-meaning practitioner—in advising how platholders should be filled, scorns the use of the popular camel-hair brush, as it caused particles of dust contained in the brush to be transferred to the surface of the plate. Maybe, this is the case when the brush is kept exposed, so as to catch flying particles of dust. But the careful worker keeps his camel-hair dusting-brush in a safe, dust-free spot.

Now, instead of advocating the application of the efficient camel-hair brush, this honest, but unsafe counselor recommends that the *fleshy part of the hand be used!* He assumes, of course, that the user's hand is quite clean, and free of dust and perspiration—which, I dare say, is what any well-kept hand should be. Still, I prefer to use, and to recommend to my friends, a *clean camel-hair brush!*

A Bouquet for the Editor

THE other day when I came in on the train, I heard a party of amateur-photographers giving high praise to PHOTO-ERA MAGAZINE, and discussing the increased price that is to go into effect on July 1. My curiosity was aroused and I at once bought a copy, examined it and enjoyed it immensely. Let me say that you certainly cannot be classed as a profiteer. You certainly are justified in advancing your price to \$2.50 a year. But why didn't you make it \$3.50 or \$4.00 a year instead? In every way you really would be justified in charging at least \$3.50, certainly by comparison with other (non-photographic) magazines that sell at the same price.

Please enter me as a subscriber for two years. In this way I not only save a dollar but I am also sure to receive PHOTO-ERA regularly for the next two years, unless the mail fails me.

With every good wish for the success of PHOTO-ERA and its conscientious and progressive Editor, I am

Yours respectfully,

JOSEPHINE B. ELLER.

June 18, 1920.

What is Impressionism in Art?

IMPRESSIONISM—according to one authority—is the art of picturing something that no one has ever seen in such a way that he wouldn't recognize it if he did see it. This is true of some photographs that have reached the Editor; and the queer thing about it is that the authors were under the impression that the puzzles they sent were artistic; whereas they had no valid excuse for existing—not a single evidence of a sane, well-ordered mind!

Terms of Self-Reproach

"I AM a real camera-fiend," "I am a rank amateur," and similar expressions of self-degradation occur occasionally in letters sent to the Editor by camerists who desire to offer an excuse for the mediocre character of their work. May I assure these workers that they are not called upon to apply to themselves any terms of self-reproach or contumely. Surely, it would never occur to the Editor to accept such terms in any degree of seriousness, or to repeat these impulsively applied epithets when publishing their articles or communications. Would it not be more fitting to convert "camera-fiend" into "camera-friend"? As to being a "rank amateur," the Editor sincerely hopes that the user of this obnoxious term may so improve his pictorial work, that he may become an *amateur of rank*—thus changing the odious adjective into a dignified noun.

The Misplaced Sign

THERE is a picture of a bride in the show-window of a Washington-street photographer, and ever so many people have written to us about it. Chiefly, we imagine, because of the accompanying sign: "Boy Wanted."—*Boston Herald.*



ANSWERS TO QUERIES



G. W. B.—Reflections in the water are often a decided addition to the artistic composition of a picture. However, a picture which includes a reflection so nearly a duplicate of the original subject that the beholder is hard put to decide which side up to hold the picture, is not an artistic composition. A reflection should be diffused by ripples on the surface of the water or by being shown as a mass. To the uninitiated, a mirrorlike reflection is of greater value than one in which detail is lacking. As a record-picture of a beautiful lake, it may be excellent; but in the eyes of art-critics it has no great artistic value.

C. K. O.—Moonlight-effects are usually made by photographing into the setting sun and underexposing. Better and more artistic effects may be obtained if the sun is partly obscured by clouds or trees. The sheen of the sun on the water should not be too dazzling or the result will be a confused array of white dots that may spoil an otherwise artistic picture. A rising sun may be used advantageously where conditions will permit, especially at the seashore. The use of a ray-filter is of advantage to emphasize the cloud-formations and to eliminate some of the too dazzling sheen of the water. However, if careful attention be given to the use of the diaphragm-stop and shutter-speed, beautiful effects may be had without the use of a ray-filter. There is always an artistic appeal about a good "moonlight" picture, and the making of one is a delight to the ambitious camerist. Few branches of photography offer a better opportunity to obtain original and striking effects.

F. D. F.—To remove dust from plates, when filling plateholders, use a *broad camel-hair brush*; or a wad of clean absorbent cotton. The brush should always be kept clear of dust and, when not in use, in a place where dust cannot reach it. Beware of overseas' advice to use the fleshy part of the hand! Think of what a clammy hand, a hot hand, a moist hand, a soiled hand, a gritty hand or a perspiring hand would do to the dry smooth surface of the sensitized dryplate!

D. S. W.—A simple fixing bath is made and used as follows: Hypo being very soluble it can be kept in a concentrated solution and diluted as required, not only saving time of waiting for crystals to dissolve when wanted immediately, but enabling one to regulate the temperature of the bath by diluting with hot- or ice-water, according to the time of year. For a stock-solution, dissolve each pound of hypo in about a pint and a half of warm water, then add enough water to bring the bulk up to a quart. For use, dilute with equal parts of water.

Should an acid-fixing bath be wanted, add to each pint of hypo a drachm of potassium meta-bisulphite, previously dissolved in a small amount of cool water, or an equivalent amount of acid-bisulphite can be employed. With most plates and papers, alum is not needed, except in very hot weather; but when required, dissolve one drachm of chrome alum in an ounce of water, and add the last thing to a pint of bath.

D. A. C.—A good cleaning-fluid is very necessary in the photo-laboratory. Many chemical deposits are difficult to remove from trays and graduates by simple rinsing, yet it is essential to keep such utensils clean to avoid loss through contamination causing spots and stains. The following fluid will very quickly remove most stains or chemical deposits from trays, bottles, etc., the article needing only to be rinsed with clear water after the fluid has done its work.

Make up a saturated solution of potassium bi-chromate (which will be about 1 to 10 in strength) and to this add *slowly* about one-tenth its bulk of common sulphuric acid, the exact proportions not being important so long as a strongly acid solution of bi-chromate is produced. This can be used repeatedly until it ceases to act.

R. C. W.—There is much to be said in favor of the anastigmat lens; but it does not follow that the camerist who is unable to buy one cannot obtain good pictures. Many of the most beautiful pictures that have won first prizes in *Phoro-Era* competitions were made with meniscus or rapid rectilinear lenses fitted to moderate-priced cameras. If you have a box-camera, do not think that you cannot compete successfully in our competitions. Do your very best and send in your picture—you may win a prize.

S. A. R.—Prints from thin negatives that shall not be flat and monotonous can be produced by using a weak and slow light in printing. Professional printers generally place their printing-frames (containing weak negatives covered by a sheet of ground-glass or tissue-paper to weaken still further the action of the light) *in the shade*. If placed in the direct sun together with negatives of normal density, the weak negative permits the light-rays to act too quickly—thus producing flat prints. The developing-solution can be bromided slightly to help produce the necessary contrast. Of course, the new contrast-papers, now on the market, also help considerably, and their use may be found the best means to obtain satisfactory prints. A weak negative will not yield a snappy bromide enlargement, unless skill be exercised in the printing and development, and in the choice of the most suitable printing-paper.

F. A. A.—Coloring bromide prints in pastel is a process easy of accomplishment, provided a suitable bromide print for the purpose may be had. Any one practiced in drawing will find it easy to apply the pastel in any color to the print, which should be on a mat or semi-mat surface. The success or beauty of the result will depend entirely upon the skill of the worker. Many prefer this method of coloring or tinting a photographic print, to applying watercolors. After the pastel-color has been applied to the print, it may be modified and transformed into smooth tones, with the aid of the finger-tip or a leather or paper stump, and beautiful results may thus be obtained. The finished print should then be fixed, which is done by holding it over the steam arising from boiling water.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Ten Dollars for News-Event Photograph

THE *Mid-Week Pictorial* is an illustrated weekly magazine, published by the New York Times Co., which announces a special offer to amateur photographers. The *Mid-Week Pictorial* is the only weekly news magazine published devoted to pictures exclusively. It is printed by a special rotogravure process, and its pictures come from all parts of the world. Sample-copy will be mailed to any address on receipt of 10 cents in stamps, so that any contestant can ascertain the kind of pictures used by the *Mid-Week*, whose advertisement is elsewhere in this issue.

Sixty-Fifth Annual R. P. S. Exhibition

EVERY genuine photo-pictorialist will be interested to know that the Sixty-fifth Annual Exhibition of the Royal Photographic Society of Great Britain will take place Monday, September 20, lasting until October 30. It will be held at the galleries of the Society, 35 Russell Square, London, W. C. 1, England. There will be two sections, one devoted to pictorial photographs, and the other to color transparencies. Entry-blanks, which contain also the twelve general regulations, may be obtained from the Secretary of the R. P. S., 35 Russell Square, London.

Photo-Pictorialists Honored

IN recognition of their consistently high grade of pictorial work, exhibited at the Pittsburgh Salons, the following-named workers have been elected to its honor-roll as "Contributing Members":—Fred'k F. Frittita, Baltimore; Dr. Rupert S. Lovejoy, Portland, Me; Margrethe Mather, Los Angeles; Oscar Maurer, Los Angeles; Ernest M. Pratt, Los Angeles; Thos. O. Sheckell, Salt Lake City; Ford Sterling, Los Angeles; H. Y. Stimmmons, England.

CHAS. K. ARCHER, Sec'y.

The Suffering Photographers of Vienna

AS stated in the June issue of this magazine, PHOTO-ERA sent, in its own behalf, an American Relief Warehouse Food-Draft, directly to the publisher of the *Wiener Mitteilungen*—the well-known photographic monthly, published in Vienna—the amount to be expended for food-supplies, to be distributed among the suffering professional photographers of the city. Herr Colditz, the Director of the Photographic Department of the *Wiener Mitteilungen*, has acknowledged with profound gratitude the receipt of this donation, and described how welcome were the food-supplies he was enabled to procure through the generosity of an American fellow-worker.

Any reader of PHOTO-ERA who wishes to aid, in a quick and practical way, the suffering craftsmen of Vienna, need but go to any bank in his community, and send such a food-draft, to the amount of ten dollars or upwards, thus enjoying the satisfaction of having contributed, in an eminent degree, to the relief of innocent and deserving victims of the Great War.

American-Made Developers

A PROPOS of the manufacture of standard developers of German origin, and that are now being made in England, it is interesting to report that a number of these standard compounds are at present being produced in the United States. The manufacturing chemist, John G. Marshall, of Brooklyn, N.Y., who is carrying an advertisement in our current issue, reports that he is now producing such well-known developers as Rodinal, Glycin and Superlight, which are in every respect the equivalent of the original German preparations of the same name. Mr. Marshall has been licensed, by the Chemical Foundation, Inc., to manufacture Superlight. He has also acquired the right to use the word "Rodinal," the word "Glycin" being common property. The advertiser adds that he is the actual manufacturer of these chemicals. His interesting booklet of many desirable photo-chemical preparations will be mailed to any one on receipt of postcard request.

A Lively Photo-Dealer

CHARLES G. WILLOUGHBY, INC., of New York, coolly reports that they have done twice the amount of business they did a year ago. It's a hustling, bustling firm; always on the watch for meritorious novelties, carrying, advertising and selling them. Then, too, they sell about one hundred copies of PHOTO-ERA a month, and every copy of this magazine—filled with interesting and attractive material, including advertisements of the latest and best in photographic specialties—makes business for the enterprising dealer. Willoughby says so, and he knows.

Portland, Me., Camera Club Elects Officers

AT the annual meeting of the Portland Camera Club, that was held on May 3, the following officers were elected: E. Roy Monroe, president; Roger Paul Jordan, vice-president; William T. Starr, secretary-treasurer; Harold E. Ayer, lantern-slide director; J. Ludger Rainville, print-director.

A Unique Paradox

WHEN our subscribers were notified of the increase in the price of PHOTO-ERA, many of them, in replying, extended congratulations to the Publisher, and wanted to know why he had not taken this step long ago. Several of them thought the new price was still too low, for so fine a magazine.

One of our witty friends remarked that twenty-five cents a copy was just right; for, in laying down a quarter on the counter, he did not have to wait for the change, as he used to. This saved him time—and time, to him, was money.

A HUMOROUSLY-INCLINED correspondent, in stating that, if the former German emperor is tried in London, and the hearing will take place in camera, asks whether they will use a Brownie or a Graflex.

EDITOR PHOTO-ERA MAGAZINE:

If postmortems are permissible in your excellent magazine, I would like to be granted space for the indulgence of remarks anent "The Old Well," which was subjected to the animadversions of the elect, in the April number of PHOTO-ERA.

Despite the "ifs" and "buts" that would obliterate the sky, light the well's interior, remove the clump of trees to right and left, change the exposure, time, move the shadow of the spout to enhance the aspect of running water in the picture, to me it is altogether pleasing, although I agree with Mr. Arthur L. Seiter, who asseverates that the ensemble is somewhat modern.

In this particular, I note that the active element of the picture is not the stout, ruddy-faced youth (with bare feet, blue denim overalls, battered straw-hat and hickory shirt), who in the "dear dead days beyond recall," was wont, with windlass or sweep, to draw water from ye olde well. Also would I chronicle the fact, that the galvanized iron pail, with its lurid band of paint, was an unknown quantity in ye olde tyme. Likewise, panama-hats, silk-shirts, and the ubiquitous cigarette were not in evidence. The nearest approach to a smoke would be a piece of grapevine, or a portion of rattan, with the possibility looming large, that father was in the immediate background armed with the traditional bed-slat or barrel-stave. Far be it from me, however, to criticize a picture of so many pleasing features.

The main object of this blast is directed towards Arthur L., who suggests that the exposure were better made "at that time of the day when country-people usually draw water."

Now, Arthur, I've lived in the country, some sixty-five sweet summers and a like number of frigid winters; but I have yet to learn if *country-people* have a certain hour consecrated to the use and behoof of dragging water from a hole in the ground. In order to keep the record straight, and that a burden may be lifted from the heart of a weary world, won't you please tell us, Arthur, if this witching-hour be high noon, post-meridian, 'twixt the glimmer and the murk, or before the dawn. I pause for reply. There being no reply, I pass on to the criticisms of one Ernest of the house of Webb, who entertains with the statement, that "the juxtaposition of the man's face is unfortunate." If Ernest alludes to the "fag" (or what appears to be one) sticking from the corner of the youth's face, I say amen! for it really is unfortunate; but it is also unfortunate that one cannot determine from the context just what is meant by juxtaposition. Perhaps, it were better if Ernest would rearrange the sentence to read: "The pulchritudinous aspect of the picture would be palpably augmented, were the counterminosity of the background and face less pronounced." We country-people, at least, would then understand that a face in the shadow against a dark ground is unfortunate.

In concluding this tumid tirade, I will say that I enjoy very much these monthly criticisms. I have had the temerity to enter prints in several PHOTO-ERA contests and Honorable Mention, in some instances, has been my portion; and just to show that my heart is in the right place, I am willing to make a Roman holiday for other readers of PHOTO-ERA, by enclosing, under separate cover, a print of my own, with the admonition to any and all, who are so inclined, to "hop to it."

Very truly,

C. C. BOSLAW.

Fortuna, Calif.,
April 16, 1920.



Help!

THERE is no question that, if the letters containing renewals of subscription to PHOTO-ERA MAGAZINE received in any one week during the past week were showered on the subscription-clerk, that hard-worked individual would be literally overwhelmed—as shown in the accompanying picture. A source of equal satisfaction was the little messages added by the subscribers, such as, "Can't get along without it"; "I would not miss a number of PHOTO-ERA for twice the subscription-price"; "PHOTO-ERA has done more for me than anything else to help me win prizes. I have had six of them"; "Here is my renewal for two more years, and best of luck for the generous and painstaking Editor"; "PHOTO-ERA is proving a friend in many ways, but not necessarily entirely in regard to photography. Please accept my hearty wishes for continuous prosperity to PHOTO-ERA and its makers."

Expressions more forcible and enthusiastic in praise of the magazine and its Editor, but too long and too numerous to quote here, distinguished most of the renewals. The Editor accepts this almost bewildering number of compliments with all due modesty and assures PHOTO-ERA's many friends that, so far as he, the engravers and the printer are concerned, the magazine will continue to appear in its customary excellence and influence, with assurance of improvement so far as possible.



The Photo-Era Jury

THE PHOTO-ERA jury which determines the prizes for PHOTO-ERA competitions each month, consists of three members: T. M. Dillaway, Director, Department of Manual Art, Boston; Wilfred A. French, Ph.D., Editor and Publisher of PHOTO-ERA MAGAZINE; and, during the temporary absence of the Assistant-Editor Mr. Beardsley, Kenneth G. Darling, A.M.



LONDON LETTER

CARINE AND WILL CADBY



THE Photographic Fair and Convention held at the Royal Horticultural Hall has come and gone. It was open for just over a week, and to judge by the large numbers of people who were there when we visited it, must have been an unqualified success. Almost every photographic firm seemed to have a stand, and, indeed, there were some names up that were quite unknown to us. This Photographic Fair was a continuation of the Photographic Arts and Crafts Exhibitions that were held annually before the war, and this was the first gathering for six years, so it was exceptionally interesting. Although, of course, organized and conducted in the interests both of the manufacturers and professional photographers, it was largely attended by amateurs as well.

We were glad to welcome back to life, so to speak, the Belgian firm of Gavaert, which, in pre-war days, produced a platinum sepia paper that, to our thinking, was remarkable in truth and richness of tone and color. Another stand that attracted us because of its novelty represented the Aircraft Manufacturing Company, and one wondered at first what this big airplane-making concern had to do with a professional photographic Fair. But we soon discovered that it had organized aerial photographic tours, and was willing and ready to undertake the snapshooting of factories, workshops, or estates from the air. There is, no doubt, a great future in this direction, for so many subjects are practically unphotographicable from the ground, and yet from a well-chosen spot in the air would be easily and comprehensively reproduced. We have referred in an earlier issue of these letters to some of the first examples of this work that were convincingly satisfactory in results, and now, as we write, we see a reproduction in the daily paper of an aero-photograph of the great Football Cup Final at Stamford Bridge on the 24th of April. This, although not a very convincing or complete view of the game, is, we think, the first time an airplane has been used to record a football-match in this country.

Another new-comer at the Fair was the Portascope, the kinema for the million. Such a thing as a kinematographic camera for the amateur was unheard of before 1914; but now the "Portascope Committee" is willing and eager to supply every home with apparatus for the making of motion-pictures, and, as these cameras are projectors as well, they should be popular if they are as practical as the makers claim.

Space will not allow of a detailed description of all the stands, and we have indicated only the absolute novelties. Upstairs, in a small room, an exhibition of professional photographic portraits was hung. There were a few striking prints; but, taken as a whole, it hardly seemed representative of English professional work, and was certainly not a strong show. We can think of quite a number of professionals whose portraits are original and different from other people's work, and none of them was represented here.

In connection with the Fair, the Professional Photographer's Association held its sixth Annual Congress. This was opened on Monday, April 19, with the reception of members by the President and Council, and an address from the President. Tuesday morning was left open to enable the members to inspect the ex-

hibits, and in the afternoon the annual general meeting was held. In the evening a lecture and demonstration of modern electric lighting systems was given by Mr. Angus Basil. On Wednesday, Mr. Herbert Lambert's lecture on Modern Methods of Portraiture, foreshadowed last month, drew a full house. On Thursday afternoon there was a discussion of business-matters relating to the profession, with ten-minute papers. On Friday, Mr. Thomas Bell, F.R.P.S., of Kodak, lectured on the Position of Professional Photography To-day. He first reviewed the outlook, giving a rosy picture of the possibilities of expansion in portraiture to five or six times its present size, affirming that the market is by no means saturated. The present-day emulsions then came under review, and the lecturer pointed out that the best is degraded by being coated on glass, its refracting and reflecting qualities being serious drawbacks. This brought us naturally to the Eastman Portrait-Film that allows the emulsion-maker to do justice to himself. Suitable printing-methods were then considered, and Kodura described, in the making of which speed has been partly sacrificed to the more important quality of perfect rendering of the finest gradation of the portrait-film.

Over one hundred professional photographers were present at the lecture, and eighty afterwards attended a demonstration of portrait-film development. Mr. Rodhead, of Kodak, did some very smart operating with half-watt lamps, and the negatives he obtained sustained fully the lecturer's contentions. Mr. Rodhead, who had been doing about forty demonstrations per day during the whole week, must, indeed, be an expert at his work.

There has been some discussion lately on the subject of paper-negatives. It has been contended, among other things, that they do not give accuracy of detail. This complaint must have been raised by young photographers in the sense that they could not have practiced the craft many years ago, when the good qualities of paper-negatives were amply demonstrated. When the photographic world was young, to be precise, about thirty-three years ago, Messrs. Morgan and Kidd showed specimens at a meeting of the Photographic Society of Great Britain (not as yet dubbed "Royal") of a photograph with the description "Permanent Contact Print on Arg: Gel: Bromide Paper, by Morgan and Kidd." It was a new printing-process then, and one wonders how, in its infancy, Messrs. Morgan and Kidd had the courage at once to describe it as "permanent." Anyway, time has proved them correct; for, as we write, we have before us one of the actual prints shown at that meeting—framed and glazed just as it was passed from hand to hand by the interested members over thirty years ago.

Now that print—no, reader, it is not a paper-negative, but we are coming to that part of the story directly—that print we should say is as bright and sharp as on the day it first saw the light. It has no doubt changed in tone with the years, having now a rich warm tint much like that of cream-mat Kodura of present day fame. But now comes the point of the anecdote. That photograph with all its beautiful and

(Continued on page 52)



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



The following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending twenty-five cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of April, the last issues of which have been disclosed to the public.

Thomas Carroll Willson, of Philadelphia, Pa., has been granted patent, No. 1,337,423; a "Method of, and Apparatus for, Identifying Pictures."

"Camera-Tripping Device," patent, No. 1,337,603, has been invented by Mason F. Jourdan, Muskogee, Okla.

Willis H. O'Brien and Daniel Siakel, of Chicago, Ill., have received patent, No. 1,337,614, "Film-Holder."

William F. Folmer, of Rochester, N.Y., has invented a new Photographic Camera, and has assigned it to the Eastman Kodak Company. Patent-number is 1,335,728.

A "Film-Winding Device" has been assigned to the Eastman Kodak Company. The patent-number is 1,335,742, and has been issued to Robert Kroedel, Rochester, N.Y.

Patent, number 1,335,860, has been invented by Herman Shapiro, Cleveland, Ohio. It is of interest to the photographic world, being a Photograph-Printing Apparatus.

Joseph H. Ramsey, of Albany, N.Y., has a "Film-Spool for Photographic Cameras." Patent-number, 1,335,917.

An "Apparatus for Drying Coated Films" has been assigned to Charles Rosier, of New York City. Number of patent, 1,336,505.

Henry H. Pierce, of Cambridge, Mass., has invented a new idea in "Film-Holders," number of patent being 1,336,377.

A "Printing-Device" has been invented, and assigned to Lester A. Stanley, of Washington, D.C. The number of the patent is 147,837.

Arthur L. Garford, of Elyria, Ohio, has invented a new and useful "Camera." Serial-number of patent is 85,755.

1,338,719, Photographic Phonograph, issued to Frank W. Asdit, St. Paul, Minn.

Copying and Enlarging Camera issued to Joseph Becker, Washington, D.C., assignor to Eastman Kodak Company, Rochester, N.Y. Patent No. 1,339,090.

Norman S. McEwen of Nashville, Tenn., has been granted patent, No. 1,339,117, for Timing Device for Cameras.

1,339,319, Camera. Kungche Chen, Shanghai, China. Photographic Printing-Apparatus, patent, No. 1,340,209, issued to George C. Beidler, Rochester, N.Y.

Charles H. E. Boughton, of Chicago, has been granted patent, No. 1,340,369, on Mount for Photographs and the Like.

1,340,618. View-Finder for Cameras. Herbert A. McCallum, Yonkers, N.Y.

1,340,619. View-Finder for Cameras. Herbert A. MacCallum, Yonkers, N.Y.

Kinetoscopic Shutter, patent, No. 1,340,887, has been granted to James F. Gordon, Toledo, Ohio.

Benjamin O. Underhill of New Canaan, Conn., has been granted patent, No. 1,340,923, for Method or Apparatus for Producing Pictures in Colors.

1,340,937. Roll-Film Carrier. Orville Charles Hummel, Nauvoo, Ill.

Camera. Patent, No. 1,341,017, to Robert H. Pearman, of Boston, Mass., assignor to Thomas E. Steere, Providence, R.I.

Edward C. S. Parker, U. S. Navy, has been issued patent, No. 1,341,338, on Photographic Apparatus.

1,341,543. Camera. Walter T. Cardwell of Birmingham, Ala.

Leveling-Attachment for Cameras, patent, No. 1,341,553, to Dale D. Hahne, Hastings, Neb.

Stereoscopic Kinematography

STEREOSCOPIC KINEMATOGRAPHY, English patent—No. 140,890 (March 13, 1919).—The invention relates to an arrangement of means to obtain stereoscopic or plastic effects with pictures produced by kinematography or like projecting apparatus and employing the ordinary film or slide as at present used for flat pictures.

According to the invention the single picture is split up into two images which are simultaneously projected on to an inclined mirror, the images being finally reflected on to a screen. These two images are identical, but are arranged upon the screen a small distance apart or slightly out of register; the extent of this lack of register is sufficiently small not to be visible to the onlooker, whilst the effect produced is to give a stereoscopic or plastic effect to the picture, the edges of the various objects thereon being shaded so as to produce a roundness or solidity to the various articles. The effect is considerably enhanced by the natural mental tendency when viewing the objects to reproduce on the mind the real shape of the object of which the onlooker is well aware. The result is that the picture appears solid and a substantial stereoscopic effect is produced. There is no blurring, and all lines come out sharp, shutter flicker is eliminated and there is entire absence of strain to the eyesight, which is apparent with ordinary kinematograph pictures.

In carrying out the invention, by means of suitable reflecting or semi-reflecting surfaces, rays of light may be split up so as to produce two images upon the screen, the two images being arranged slightly out of register. It is preferred to employ a translucent reflector placed at an angle to the path of the rays of light coming from the projector. The majority of the light passes directly through this reflector and produces the main image upon the screen. A portion of the light is, however, reflected from the surface of the transparent or translucent reflector on to a secondary reflector and thence to the screen in a position slightly out of register with the main image.

The screen upon which the pictures are viewed is preferably placed below or above the line of projection and the rays of light are thrown by the projector on to an inclined mirror or other reflector and thence to the screen; the onlookers viewing the image upon the screen through the reflector.



WITH THE TRADE



British Industrial Ambition

ONE cannot help admiring the sincerely patriotic attitude of the *Photographic Dealer*, the well-known English photo-trade monthly, with respect to former-enemy goods and products. Its crusade initiated during the late war is still maintained, the chief object being to foster the English manufacture of optical glass and chemicals—two of the vital photographic necessities for which Great Britain had been forced to depend upon Germany. The *P. D.* has erected a barrier, founded upon patriotism, which, in the eyes of many a consumer—for the typical Englishman is nothing if not practical—is regarded as mere sentiment, now that the war is over. The resumption of trade with its former enemies, and present rivals, is deemed by Great Britain of greater importance; and it is only by such an expedient as a high protective tariff and supreme quality and efficiency of the home-product that our cotemporary can hope to see an attitude of indifference towards German-made goods.

But while the zealously loyal *P. D.* is fighting for British supremacy in the photographic industrial field, it can do much to diminish publicity of rival products; and that is by urging the adoption of purely English trade-names for English equivalents of the imported products—provided that the quality be just as good, if not superior.

Why perpetuate the name of a well-known German type of camera, in designating the English-made equivalent, when an original and perhaps more euphonious name would be more to the point, and, if you will, eminently patriotic? If a British reagent is, in every respect, just as good as the German original, then why retain the German tradename, *Metol*? Is not the English designation, *Serchol*, just as agreeable to English ears, and should it not make an even more successful appeal to the English consumer?

According to the well-known proverb, the proof of a pudding is in the eating; and the consumer, with all sentiment set aside, can be trusted to patronize the home-product. With at least equal quality and efficiency definitely established and recognized, the English product may call to its aid the immortal Shakespeare, who declares that that which we call a rose, by any other name would smell as sweet.

W. A. F.

When Quality is Recognized

His store may not be the largest of its kind in the metropolis; but "Papa" Andrews, the veteran proprietor of the New York Camera-Exchange, in Fulton Street, has been doing a very successful business these many years. Recently, when his neighbor, the Obrig Camera Company, had stopped doing business, and the assets were being sold, "Papa" Andrews dropped in, looked around—and what do you suppose he picked out as his purchase? Sixteen copies of *PHOTO-ERA*, THE AMERICAN JOURNAL OF PHOTOGRAPHY. It was the beautiful April issue, which, as everybody knows, was a great seller. Mr. Andrews showed good taste and good judgment.

Color-Photography Out of Doors

ONE of the most fascinating branches of outdoor-photography is the exposure of Autochrome plates. This and the Paget Color process are the best two methods in modern color-photography and represent, in the form of easy achievement, the aim of scientific research during the past one hundred years, viz. the direct and truthful rendering of objects in their natural colors. The joy and satisfaction in securing color facsimiles of such outdoor subjects as flowers, butterflies, mushrooms, trees, surf, general scenery, and even portraits, must appeal to every true lover of nature.

While the development of the exposed Autochrome plate and its conversion into a color-positive is, in itself, an easy mechanical operation, the correct exposure of the plate is of the greater consequence. To determine the accurate exposure, the photographer was obliged to sacrifice a number of expensive Autochrome plates, which also consumed valuable time. Now, however, he needs only to consult an exposure-meter, in the same way as for ordinary plates, and, in a jiffy, he can ascertain the amount of time the color-plate requires—provided, of course, that the conditions of light, etc. have undergone no change in the meantime.

Below is a list of reliable exposure-meters which have a provision for ascertaining the correct exposure of Autochrome plates: the Heyde Actino Photo-Meter; the M. & V. Swiss Photometer; the Relio Exposure Scale; the Harvey Exposure Meter; the Burt Meter; the Trilux Exposure Meter and the Wynne Exposure Meter.

If the camerist should fail to obtain any of these standard meters, or, having one, cannot apply it successfully to Autochrome or Paget plate exposures, let him communicate at once with the publisher of *PHOTO-ERA* MAGAZINE.

The London Letter

(Continued from page 50)

sharply defined detail was printed from a *paper-negative*! Mr. Leonard Marshall, who made it, tells us that he remembers well Morgan and Kidd telegraphing to him at the time, asking permission to use his paper-negative to demonstrate their new printing-paper. But paper-negatives go even farther back than this. Mr. Marshall—who at a later date did much to popularize the panoram-camera by the beautiful work he produced with it—has in his possession some large paper-negatives made by his father in or about 1855. We have had the pleasure to examine these. They measure 12 x 9½ inches and, apart from damage received from a professional who had them to make some prints, are still in good condition. The (to us moderns) amusing habit of the photographers of that time of putting in great rolling clouds by means of Indian-ink or some such device, is plainly seen on these negatives; but we do not think anyone at the present time would be satisfied with the rendering given, as the clouds are altogether too obvious and detached from the subject.

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AUGUST

1920

PHOTO-ERA

The American Journal of Photography



BOSTON, U. S. A.



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EPILOGUE
EDWARD WESTON

PHOTO-ERA

The American Journal of Photography

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No. 2

True Sepias

FRANK B. HOWE



F one wants a startling demonstration of the flexibility of the English language, Mr. Photographer, take an afternoon off and walk down the main street of your particular city or town, be it New York City or Pyro Corners, and gaze upon the wonders displayed by the various photographic studios and stores. "Sepias," they call them; but if the shade of Daguerre were to return suddenly to earth, he would probably define these productions—that we fondly apply that name to—as any photograph whose tone varied from yellow to deep purple. For it is a fact that anything passes for a sepia, provided it is not an absolute black-and-white picture. Why mince matters?

Why this condition should exist, is not the province of the present writer to explain. His purpose is to propound a method whereby a good sepia can be made by the re-development-method from any black-and-white photograph, despite the conditions that may have existed in its making whether it be underexposed, overexposed, underdeveloped, forced in development, made with an excess of bromide, or treated in any of the dozen ways that we are told are detrimental to the production of a satisfactory sepia. We refer to a true sepia, without a trace of yellow or purple in its make-up—a real, rich, rare sepia, and of that type which fairly stands out apart from the paper-support in the sheer beauty of its tone.

This process is based upon the use of the following formula, which is the customary one for re-development. It is given in case anyone may not be familiar with it, although it is doubtless recorded in the notebook or on the walls of the darkroom of most photographers:

Stock-Solution 1: Water.....12 ounces
Potassium Ferricyanide..... ½ ounce
Potassium Bromide... ½ ounce

Stock-Solution 2: Water..... 6 ounces
Sodium Sulphide.... ¼ ounce

From these stock-solutions, solutions for use are made by dilution as follows:

Bleacher: Stock-Solution 1.....12 ounces
Water.....12 ounces
Re-developer: Stock-Solution 2.... 6 ounces
Water.....48 ounces

As stated previously, any black-and-white photograph, made on any kind of developing-paper, may be used, irrespective of the accuracy of its production with regard to correct exposure and development, or amount of bromide used in the developer.

First, without previously wetting the print, immerse it in the re-developing-solution for a period of three minutes, be careful to keep the solution moving—by rocking the tray or, if there are several prints, by continual handling-over. At the expiration of this time, the prints should be rinsed thoroughly, preferably under a gentle flow of running water. There is no apparent change in the picture at this time; it still has its original black-and-white appearance.

The print should next be placed in the bleaching-solution, as in ordinary re-development, and left until all trace of the blacks is removed. It will not bleach out as completely as is the case when the print is bleached without previous immersion in the sulphide—the image is very distinct in comparison to the non-sulphided ones. As soon as the picture loses all blacks—in case of doubt, leave it a little longer, the length of immersion in the bleacher makes no difference in the tone—take it out and rinse it again, until all the yellow from the bleaching-solution is washed off. Then transfer it to the re-developing-solution again and let it remain until original detail returns. Generally, this reaction is completed in a minute; if not, the bath is old and a fresh one should be used. Following this, the print should have a short immersion in the

acetic-acid hardener used in the fixing-bath of all developing-papers, and fifteen minutes of washing. When this operation is completed, the result is a sepia that *is* a sepia.

At times of unusual climatic conditions—either of heat or humidity—it may be found advisable to lessen the time in the first bath—the sulphide—to two minutes. This should not be done unless the finished print tends to show a purplish tinge or to lose its richness and pluck. Ordinarily, three minutes will be found correct. Should minute blisters appear, dilute the stock-solution (1) with an equal amount of water.

The slippery, slimy feeling on the hands, after one has been working with the sulphide, can be removed instantly by immersing them in the acetic acid hardening-solution. The preparation of the solutions and the producing of the sepia tones constitute really fascinating work.

Such is the process and such is its simplicity. With its use, there is no excuse for poor sepias. And last—but by no means least to those who employ photography commercially—is the consideration that there is no additional expense involved in its employment. The method is at hand. Help yourself!

Landscapes with Figures

GEORGE W. FRENCH



STUDY of the works of the world's greatest landscape-painters would convince the student of the fact that the most popular works are those which contain figures. Corot, for instance, painted very few pictures which were not brightened up, here and there, with touches of human life and there are very few landscapes, indeed, which are not improved by the addition of a bit of human interest.

In treating this important subject, there are several phases that need consideration. First, we should ask ourselves whether the figure is necessary to carry out the idea of the scene; and, second, whether the figure or the view is the more important part of the composition. Then, if we decide to use the figure, we must be very careful to place it where it will best add to the merits of the composition; or, if we must have the figure at a certain point, we should place the camera so that the rest of the composition will harmonize with the figure in producing a well-balanced composition.

Virtually, nine out of every ten landscapes are improved by the addition of a figure. Many of our landscapes are roadways, farm-scenes, trees, lakes and forests, and there is something about each that appeals to some particular emotion within us; so that the figure, if placed appropriately, completes the feeling of satisfaction. For instance, when we gaze at a beautiful road that winds along under shady trees, we like it not only because of the pleasing grace of the lines and beauty of its tones, but in good part because of the mental image formed of our

walking or driving along such a beautiful road. A figure placed therein is entirely in keeping with what should actually occur were we to make the most of the scene. So this single illustration leads to my next statement which is that figures should be in harmony with the scene. You will recollect that in *March PHOTO-ERA* the picture of the two youngsters on the fence in the meadow was criticized and the winning criticism remarked that Dutch cuts and best clothes were not in harmony with a meadow-scene. This aptly illustrates my point; but I could be still more concrete by saying that in a picture of a rustic, old roadway winding along between old rail-fences, an old farm-team would be much more fitting than an automobile.

As to the size of the figure in the picture-space, there is no set rule. Of course, it will depend upon its importance as a part of the composition. If it is so large, and occupies such a prominent place in the foreground that it attracts a good part of our attention, it is apt to produce a genre. It is a good plan to use the figure either as a balancing-device or as an adjunct to the general theme, without allowing it to occupy a space longer, either way, than one-sixth of the diagonal of the picture. However, figures should be large enough to be distinguishable. There are times, when we can place a figure in the extreme distance in such a manner that, when contrasted with the background, it forms a valuable unit in the composition.

As a general rule, it is not judicious for most of us to attempt to place figures in the fore-



UP FROM THE MISTY LOWLANDS

GEORGE W. FRENCH

ground of a landscape because of the skill that such treatment calls for, lest we make a genre of the work or occupy so much space with the figures that they detract from the balance of the view. Corot could use foreground-figures with beautiful effect; but with the brush he could do many things that are not possible with the camera. The most common views in which we really need foreground-figures are seashore—beach-scenes—and extended views of home-scenes. But the larger the landscape-proportions are, the easier it is to use figures in the foreground without trespassing on the attractions of the landscape itself. The grouping of several figures really constitutes a subject for another article; but we might mention here that the tendencies to avoid are: the crowding of figures and placing them too closely together, scattering them too much, grouping them in a symmetrical order, and allowing their attention to be divided.

Of all the parts of a picture, the foreground is the most important from the standpoint of composition. More often than seldom, the amateur fails right there in his struggle to attain skill as an artistic worker. Experienced pictorial workers have always given it extreme attention in preparing for an exposure. Very often quite a transformation has to be effected before the setting is satisfactory. In general, they do not use figures in adapting their foreground to the view; but they do use other mediums to add interest, and to produce balance by adding interest to blank spaces. How often we all make use of footprints and transplant bits of vegetation temporarily in order to add interest to extended monotonous parts of the landscape-picture.

It is not my intention to elaborate on the talked-to-death subject of types of camera-enthusiasts—the type who snaps everything that looks good and must always have someone stuck in the immediate foreground staring apishly at the camera, and the type who looks only for the artistic and then works out a plan to get the best effect from that particular setting. Type number one will always exist, and it is perfectly proper that he should; but type number two is the one who will read this article and every other article that aims to create wider interest among camera-owners in the charming pastime of looking for the best only and then making even that more interesting. And right here I must add that he who would get the most satisfaction out of his work should not combine his record-pictures with his pictorial ones. He should have two sets of albums for his prints, for they serve two distinctly separate purposes, and by

having only pictorial prints in one set, he will find constant enjoyment in looking this set over from time to time for the purpose of noting whether he is making progress.

Now as to “looking for the best only and making even that more interesting”—no one, I believe, will ever learn what real picture-fun is, until he trains himself to hike for the open on a real picture-hunt. If he has a friend to go with him who also loves the sport, his enjoyment will be doubled for he can not only chat as he goes along, but he will be prepared to make landscapes with figures whenever he wishes. Then to get the most out of his pictures, he must decide whether the light is right for the best results, and whether the landscape would be better with or without a figure. This is a difficult point about which to give instructions, for much will depend on each individual's taste. If the scene is already well balanced, and if the lights and shadows are beautiful and the aerial perspective is pronounced, a figure will not be of any particular advantage; but if he would have the picture tell a story, through association of a figure with the surroundings, or if it is not correctly balanced, he can use his friend to the best advantage. At times, however, he will decide that an entirely different figure is needed. For instance, a graceful road leading to or from a set of farm-buildings would be greatly improved by having a farm-rig plodding along in the distance; and, in fact, almost any stretch of road can be improved as a picture by including some appropriate figure properly placed.

To obtain the best picture possible of already pleasing views, we often find that one or two elements are lacking at the particular time of our visit. Perhaps the sun is not in the most advantageous position, or maybe the sky is blank; perhaps the wind is too strong for the time-exposure needed, or maybe the desired farm-wagon does not appear when everything else is favorable. Then we must exercise patience and resourcefulness, and wait or even postpone our attempt until another day. Patience is a big asset in striving to obtain the best results from landscapes; and, without it, our pictures would never be more than commonplace. The writer, who is not overblessed with that wonderful quality, spent three years getting a satisfactory picture of “Along the Dusty Highway,” and this is not wholly satisfactory, for what was wanted along the road instead of the automobile was some sort of a farm-rig. The reason for this long period of being unsuccessful was because it had to be made on the annual vacation, and preferably when sunshine, clouds and a figure were present. It is an actual fact, that on each



"HOW DEAR TO MY HEART,"

GEORGE W. FRENCH

of the first two years of trials, the grass was worn to the brown earth because of so much sitting around waiting for a combination of team, clouds and sun at just the opportune time—2.30 to 4 P.M. when shadows were at their best. There is a setting here for a beautiful picture and sometime I shall get it!

In all such picture-making we must keep in mind a very important phase of pictorial work, and that is composition, for without it a picture is valueless from the artist's standpoint. Just now, I have reference to the horizon-line. It is easy by holding the camera low when figures are near the foreground, to obtain a picture in which the figure looms above this line, thus producing an impression of extreme height, and if the camera is held high, the impression of looking up hill will result. The horizon-line should be kept away from the middle of the view, vertically, and it should be remembered that a straight horizon-line is much less artistic than a pronounced broken one.

There should be no need of warning against making a picture when the subject is gazing straight at the camera. In this class—figure in landscape—it does not matter so much as in genres; for, sometimes, the figures are so small

that we do not notice them in particular; but even so, catching them unawares or posing them properly is the most satisfactory method to use.

The same rules that apply to plates, exposure and lighting, apply to landscapes in general. To be brief, these are double-coated or backed orthochromatic plates, a ray-filter, an exposure-meter, a tripod, and a lens-shade. Without every one of these, your work will never be above the commonplace; for the beauty of a picture depends in great part on the quality of tones and halftones, and one cannot render these properly without the orthochromatic plates and the ray-filter. And then, time and money are big assets to most of us—we can save on each by using a meter and thus ensuring against wasting a plate and the time spent in preparing for the exposure. Lighting makes or ruins the landscape-picture. It is rarely ever that we can get the most pleasing result with the sun directly back of us, or directly at the side, or directly in front. When it is directly back, we get no shadows. When directly at the side, all shadows run in lines parallel to the base line of the picture, and when directly in front, the shadows run directly towards us, often in monotonous vertical lines. I believe that ideal re-



THE SUNLIT VALLEY

GEORGE W. FRENCH

sults can be obtained with the sun in a position between the side and the front, for we then get a play of sunlight on the edges of the darkest objects and a beautiful lighting-effect with fine oblique shadows which often serve to balance the composition and make an interesting picture of an otherwise monotonous foreground.

If beginners or even many experienced workers would realize the importance of using the equipment mentioned and studying for the best lighting-effects, what a difference it would make in their work.

It is true in photography as in every other human activity, that one person aims to become efficient where ten are content with simply learning how to do a thing only fairly well. Thus their judgment of real merit is undeveloped. It is a law in economics that we get only what we pay for. Our tastes become more refined only in proportion to what we sacrifice in time or money or both. If we use a cheap lens and never study the results of better ones, our standards of photographic art will be mediocre and our endeavors stunted. If we do not read about photography, we have no way to learn what is being done, what improvements are being made, and how we can obtain better results. Then, if we do read but do not practice,

it is but an example of our poor standards. Either we have not the "push" to devote the energy to it, or we are satisfied with mediocre results. I have always admired PHOTO-ERA because it stands for quality. It does not encourage slipshod work nor does it cater to any one. It aims to educate, and it is certainly obtaining gratifying results—judging from what we often hear from its readers and other sources.

There is so much that could be added to this subject that it is difficult to stop. Landscapes with figures, like any other landscapes, are failures as pictorial work, unless they contain atmosphere and proper perspective. Atmospheric effects are obtained on hazy or misty days, and well against the light. Dark, heavy foregrounds sharply defined with the distance out of focus, are the means to obtain fine atmospheric effects.

By removing one half of a double lens, we shorten our field of view; but add to correct perspective by eliminating distortion entirely. Our exposure, however, naturally is increased, because of the increased focal length.

As for paper, I prefer for all months, except winter, a rough-buff paper, as soft as the negative will allow, yet we should aim for as contrasty effects as possible without blocking up the shadows.



WATER-LILIES

PETER BOTEH.

Warnings to the Photo-Salesman

CHARLES G. WILLOUGHBY



FEW years ago, I took occasion in PHOTO-ERA to call the readers' attention to the dangers that beset photo-dealers and professional and amateur photographers through the operations of light-fingered artists who, at that time, were preying upon these people, and the public in general, by stealing cameras or lenses wherever available. Since that time the game has gone merrily on until at present there are so many new devices in the art of stealing photographic implements that it has become impossible for the owners of these to keep pace with new methods. The thief is generally several laps ahead; for stealing is his business.

There are two methods that may successfully be employed in coping with the situation. The first one is to shoot the thief at sunrise; but failing in this, we are left to adopt the other method. This one is for the owners of photographic apparatus to educate themselves. In other words, keep ahead of the thief by making a study of his methods, then, when you catch him with the goods, be sure to do one of two things—either make it necessary for the ambulance to bring a broom along to sweep up what is left of his dismembered body, or follow up the prosecution of his case until you have been able to drive over the road which he has helped to build while in chains.

The amateur who owns a high-grade camera does not wish to lose it; therefore with him, "eternal vigilance" are words worth while. If he is on the train, his camera should be locked in his bag when he leaves his seat for any length of time. It should not be left in sight where it might be easily picked up by some one passing through the car. When he rides on the boat, he should keep the camera with him constantly, unless he has a berth, and, if so, the trunk has a lock and it should be used. In the hotel, it is advisable to keep the camera in the trunk when it is not in use. In the home, it should be insured and kept out of sight in a secure place. Again I say, eternal vigilance helps to spell permanent ownership.

The professional photographer usually employs cameras of such size and weight that the thief seldom, if ever, gives a thought toward "lifting" them; but it is the lens he wants, and not the camera. Many studios are of the one-man type with a receptionist sometimes assisting in the work. Generally, when luncheon-time comes along, there will be only one person in the

studio, and this proves the psychological moment for Mr. Nimble Fingers. In every photographer's studio, the camera-stand with lenses in sight is on the floor of the studio proper; and it is not a difficult task for the thief to get by the one person left at the place around the noon-hour. They do it all the time. Photographers should do some thinking along these lines, thus removing the temptation to steal. The lenses may easily be detached and put in a safe place when not in actual use; but how many photographers do this?

But the main scene of operations in lens-and-camera-thieving may be found at our photo-supply houses. There is a constant stream of stolen cameras and lenses coming from these centers. This would be a long article, indeed, if all the devices of the thief were enumerated; but the mention of some of their cunning tricks may prove both interesting and educational to those who have not awakened to the situation. New devices, of course, are sprung every day; but if the dealer acquaints himself with the fundamentals it will go a long way toward fortifying him for the detection of the new tricks, as they are termed. Here are some of them. A would-be customer edges up to the counter and offers a camera or lens for exchange, leaving it on the showcase rather carelessly. The salesman shows him an outfit, and the thief tells him it looks good; but he would like to see another, in the meantime stepping away several feet from his own outfit. At this juncture the thief's confederate moves up near it, and it usually becomes an easy thing for the confederate to get it. The crook remaining behind demands pay for his outfit, and many times, the dealer not wishing to have a scene created in his store, nor defend a suit in court, settles and swears that it will never happen in his place again.

Another very common error may be found in seventy-five per cent of the supply-houses to-day. Salesmen in these places will at times place on the counter from two to five outfits, and not one in ten can tell you when a camera is missing. It might seem so, at first thought; but try it and see. It took us at least two years to drive this home in our establishment, and before we could successfully do it, we arranged to steal outfits from each other. Personally, I have in dozens of cases slipped a camera or lens from a salesman, and in a couple of hours would call the young man in and ask him if he knew an outfit had been stolen from him while he was waiting upon



"NICE DOGGIE!"

GEORGE W. FRENCH

a particular customer. He would invariably be positive that he put every outfit back in stock.

To-day, our salesmen have one thing on the counter at a time. If a customer wants to see something else, then back in the case goes the article that was first being shown. The thief has a cinch when he can inveigle the salesman into showing him two or more outfits at a time.

A thief came into a well-known supply-house, recently, and asked to see a reflex type of camera with lens. The salesman was at the time waiting upon another customer, and, had he known his business, would not have shown the reflecting outfit before he had finished with the one who came first. He handed it out like a farmer, and proceeded to finish with his prospect, when suddenly the thief handed back the outfit with some remark, and the salesman placed it on the shelf and gave it no further thought at the time. When they came to look at the camera a few moments later, the lens was missing. The thief had simply unscrewed it from the front-board, and closed the lid, feeling confident that the salesman would not give him any further thought, but would finish with his first customer which completed the program as the thief had planned.

One morning, early, a fellow of good appearance walked into our place at a time when only

two of our men were in the store. This fellow walked calmly behind the counter and picked up an expensive outfit. He deliberately started to walk toward the door, hoping to get out without suspicion, and would have done so had it not been for the fact that one of our men happened to be up on the mezzanine floor and had kept an eye upon the stranger. When the thief saw our man coming down the stairs on the run, he jumped out of the door and a sprinting-match followed. It lasted for a couple of blocks, when they all went down in a heap in a subway entrance. The camera came back to the store, and the present address of the thief is Sing Sing Prison, Ossining.

Here is another pretty good one. A crook will come into the store, select a high-grade outfit, and request that it be sent C. O. D. to some hotel in the vicinity at a certain hour. At the appointed time, the crook waits in the lobby for the boy to deliver the package. When the boy arrives, the crook steps up to him and asks if the package he has to deliver is addressed to a certain party, mentioning it of course, and naturally the boy's suspicion is not aroused for he is glad he has so easily found the would-be owner. The crook either gives him a worthless cheque, or takes the package, saying that he wants to go to his room for the money. Once in the elevator,

the swindler is on his way to the pawnbroker; for he gets off the elevator and walks down the stairs unobserved.

A pretty clever scheme was recently tried on a certain dealer in cameras and lenses in New York City. The telephone-bell rang one forenoon, early, and the call was switched to the manager. The party at the other end of the line represented himself to be the buyer of a large and well-known brewery-concern, and said that he had been asked by the management to buy for them several high-grade cameras which they desired to use as presents in pensioning several of their old employees. He stated that they had already sent to the manufacturers for catalogs, and, after looking them over, decided upon a—camera with F/4.5 lenses listing at \$85.00 each. He stated that ten were needed, and asked if they were in stock. Fortunately for the early consummation of the deal, they happened to be on hand. The prospective buyer stated that the firm would send down a messenger with an order, and the manager, bubbling over with his ability to put over such a large order so easily, replied that the outfits would be ready at a certain hour. When the appointed time arrived, the messenger was on hand to get the goods, and presented the brewery concern's order duly countersigned and which was sent to the credit-department for the usual O. K. Up to this moment, no thought of misrepresentation had entered into the transaction. Here was an order amounting to over \$800.00, and naturally the credit-department conferred with the manager regarding it. It was decided that they had better call the brewery and have the order confirmed. It proved that the brewery had never thought of placing such an order. The thief had stolen one of their order-blanks and forged both order and signature to it, and he would have gotten by with his scheme, had he not been so greedy in ordering so many cameras at one time. The supply-house made the mistake in not packing up a dummy-outfit, delivering it to the messenger (who proved to be one picked up on the street) and sending a detective along behind when it might have been an easy matter to have apprehended the crook.

The most clever piece of work, to my mind, was successfully put over at a certain photostock house in this city, some time ago, and, while it does not come under the caption of stolen cameras and lenses, it possesses so much of original crookedness that I must acquaint you with the scheme. The cast of characters in this drama will be known as follows: photo-dealer, Mr. A; photographer, Mr. B; photographer's customer, Mr. C. We will call the crook by his right name.

Time, first of the month; scene, New York City—Herald Square district. On the fateful morning, before B gets down to work, the crook waits in the hallway for the postman. B's mailbox is then rifled and, among other letters taken are one each from A and C. A's envelope contains a statement of B's account which amounts to less than ten dollars. C's envelope contains a cheque which was in payment for some photographs which B had made for him. It amounted to \$17.00. The crook takes this cheque, raises the amount to \$77.00, then goes down to A and presents it with forged endorsement in settlement of B's account. The bookkeeper accepts the cheque and hands the crook the difference in cash—never dreaming, of course, that he does not represent B.

In the old days, our police-department, here, gave us little assistance in locating stolen lenses and cameras; but now it is different. The same thing holds good in other large centers. Here, every dealer in second-hand goods must have a license for which he is taxed a certain amount. Each day, a blank must be filled out giving a full description of the articles purchased, the name of the party who offers it for sale, and any other information that might be possible to give. They keep an up-to-date list of lenses and cameras stolen in different parts of the country, and, with this before them, can locate missing goods readily. Therefore, it behooves the dealer in second-hand goods to be very careful what he buys or takes in exchange, as well as to know something about the party who offers the goods for sale.

I believe that there is a much higher code of ethics employed these days than existed many years ago, as far as second-hand dealers in cameras and lenses are concerned; but on the other hand, there is a much larger army of crooks than in the old days. Thus, the dealer has more with which to contend, for he is continually kept on the anxious seat watching what might happen next.

He will, however, be able to lessen the number of stolen cameras and lenses if he educates his salesman to become vigilant in everything he does. Remember that the man or woman who comes into the store with a coat on the arm possesses a weapon that is mightier than the trick hand-bag or satchel. This coat, when thrown carelessly upon the counter, is apt to carry with it a multitude of sins. It is the thief's best bet. Watch the overcoat. Then, again, if only one outfit at a time is on the counter, you are a pace ahead of the crook who stands nearby awaiting an opportunity. All strangers are not crooks; but many times it happens that crooks may be found among them.



THE FENWAY

JAMES COOPER

An Amateur's Confession

ENOCH M. BARKER



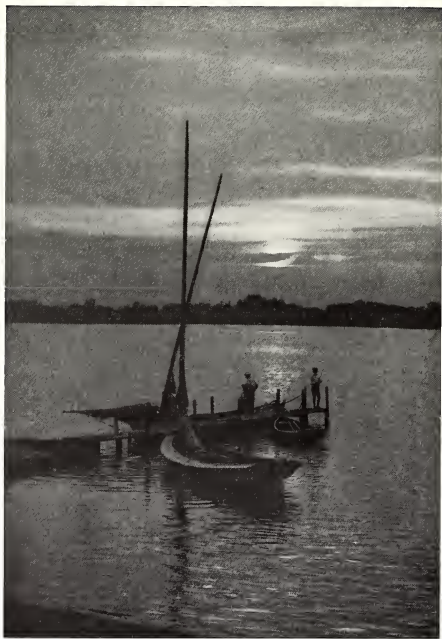
Y dear Mr. Editor and photographic friends. It is with regret that I am obliged to confess to you all that a great many of my friends have proclaimed me the most selfish man in the amateur photographic ranks. After considerable thought, I have concluded that they are right in their announcement. All through thirty years' snapshots, time-exposures and, sometimes, no exposures, and making all sorts of prints, with all kinds of papers, enjoying a few of the best results and casting into the waste-basket many failures, the thought never occurred to me to share with my amateur-friends the pleasure of looking over some of the results, so that they could have an opportunity to criticize, condemn or tear to pieces to their delight.

With a faint heart, I submit to you, Mr. Editor, a few specimens for publication, to be rejected or accepted, just as your judgment dictates. While having enjoyed photography through all these years, nothing has interested me more than taking my little, silent companion, a $2\frac{1}{4}$ x $3\frac{3}{4}$ Speedex, for a ramble through the country, looking forward and backward to discover some view that would, according to my idea, be artistic. When one attempts to search for views of

this nature, a lot of patience is necessary; for it often happens that the ramble ends without an exposure, not because the object looked for has not been found, but principally due to the lighting, and to the fact that one is on the spot too late in the day to obtain the effect desired. The writer often makes a note of the location and the hour of the day the picture in question should be photographed and makes a second trip some other day.

When taking these trips, the camerist should provide himself with a small saw measuring about five or six inches, also a wooden handle in which the saw can be fitted when wanted for use. This instrument has been a very useful article, especially so when objectionable shrubbery or small trees obstruct the point of view.

I remember one instance when this tool came in at an opportune time. A very pretty view presented itself to me and there was only one spot to plant my tripod camera to get it; but, on focusing the scene on the groundglass, I perceived a small tree about three inches in diameter in the center of the foreground and just high enough to divide the view into two parts. The little accessory, mentioned above, came forth and, in a very few minutes, the objectionable



EVENING, WEST RIVER

ENOCH M. BARKER

trespasser was removed. A knife to remove the object would have caused considerable pain to the user, not taking into consideration the amount of time consumed in cutting through it. On another trip, the sound of falling water was distinctly heard, but was not located until by accident while foraging around some thick bushes, a very pretty stream and beautiful falls loomed up before me. To get this picture, the saw with the aid of the knife removed enough of the bushes and intruding branches to enable me to obtain a very satisfactory picture.

The writer does not disapprove the so-called snapshot practice; but, if insisted upon, the picture-maker must be sure that the subject has at least the proper lighting. Through my entire experience as an amateur, I have used all-sized cameras, from an 8 x 10 down to a 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$, and

during the past three years, I have confined myself to the smaller size. This camera is equipped with a 3 $\frac{1}{2}$ -inch focus Goerz F/6.8 lens in combination with a Compound shutter, and negatives made with it can be enlarged to any size desired. The illustration of "Gwynns Falls Park" was enlarged to an 11 x 14 and appeared just as satisfactory as the one enlarged to a 5 x 7.

This equipment may be more expensive than most amateurs would care to invest in; but to obtain the best results, I consider it is necessary to use the best outfit that can be had, especially so as regards the lens. In my estimation, no other combination is better for making pictures of landscapes and of children. Most of the pictures submitted with this narrative were made with this combination and enlarged to 5 x 7, and give all the appearance of contact-prints.



IN GWYNN'S FALLS PARK, MARYLAND

ENOKI M. HARBER



SUNLIGHT-PORTRAIT

A. H. WOOD



SUNLIGHT-PORTRAIT

A. H. WOOD

Sunlight-Portraiture

A. H. WOOD

HAVING recently made some experiments along the lines of sunlight-portraiture, I feel certain that others could profitably take up this exceedingly interesting branch of photography.

Not long ago, being engaged in making home-portraits in the Midway—California's celebrated oil-district—I was unable to obtain anything satisfactory, by time-exposure, of an exceedingly active boy of three. As a last recourse I had the parents bring the child into the front-yard where, after surrounding him with his playthings, we finally succeeded in making him forget that he was having his picture taken. In a very short time, I was able to make three instantaneous sunlight-exposures. Somewhat to my aston-

ishment, the parents were delighted with the results, preferring the natural positions of the snapshots—the one of the child examining bug being especially appreciated—to the more stiffly overretouched poses of the studio. I obtained a twenty-dollar order, together with a promise of further work in the fall.

Now a word regarding the technical side of the sunlight-photograph. The exposures were made by placing the child between the source of light—in this case the sun—and the camera, care being exercised, of course, that the lens was properly shaded from the sun's rays. By turning the child slightly from side to side, wonderful possibilities will be readily seen for obtaining shadow-lightings. The play of light and shadow upon the face enables one to get a great variety

of lightings—anything from a Rembrandt to a line-light. My instantaneous exposures were made upon portrait-film with a Zeiss Anastigmat lens, F/6.3, wide open. The films, which were developed up fairly strong with the usual A.B.C. pyro-developer, were of sufficient density to make vigorous prints upon a mat-surfaced portrait-paper. The delivered prints were in sepia.

Of course, if one wishes to make a real study

of sunlight-photography, one has merely to turn to the better grade of motion-pictures. The directors and cameramen have become masters of the use of light and shade; sunlight-effects are their stock in trade. Yes! big things are being done photographically by the motion-picture experts. Half an hour with an Arcraft Picture should reveal unexplored treasures to the observant photographer.



How Lenses are Made

THE least-informed person knows how difficult is the making of a lens. Walter Thielemann sketches in the *Zentral Zeitung für Optik und Mechanik* the process as follows:

In the recent war, lenses and the whole series of optical instruments (field-glasses, periscopes, etc.) played a very important part. The making of these lenses requires exact scientific work based on long experience, and it is, therefore, comprehensible why photographic and kinematographic lenses which consist of merely one or more pieces of glass in a metal mounting are comparatively expensive. But a person who knows the care and labor required to produce from the raw materials the individual lenses of the required shapes, will understand much better the reasons for the high prices when adding as well the general expenses of the factory, interest on capital invested, management, advertising, mountings, which must be taken into account.

Ordinary lenses are subject to a whole series of errors. In order to eliminate these, all photographic lenses except the very simplest spectacle-lenses which, for most purposes, are useless, are composed of two or more single lenses fastened together, and these single lenses are made of various kinds of glass which differ in their index of refraction and in their power of dispersing the colors composing white light. If the single lenses are properly fitted together the errors can be remedied or, at least, greatly reduced.

Before the manufacturer undertakes the production of a photographic lens, he must calculate its theoretical optical system with a view to the use to which it is to be put. He computes the curvature and the grouping of the lenses that will give the type desired. If he cannot obtain from the glass-maker a suitable kind of glass for his purpose, he must prepare it himself or select one that comes nearest to his require-

ments, and must modify his formula to conform with the new quotients given by the glass selected.

Photographic or optical glass requires casting of absolute uniformity. If this is lacking, inequalities appear which cause irregular refraction, thus preventing sharp focusing with the lens. To obtain uniform casting, the mass of glass must be kept in a molten state for a day and a half. To avoid breaking the container by the intense heat required, large clay-crucibles provided with a stirring-apparatus are employed. When the glass is ready to be cooled, the crucible is brought into the air and the mass of glass cracks owing to the sudden change of temperature; in order to remove it from the crucible this must be broken. The utilizable pieces of the broken glass are again softened and pressed into plates which are now passed to the optical factory.

These glass-plates come to the optician in a faceted form, so that their clearness can be determined. They are divided by a diamond circular saw into small pieces which represent the future lenses, according to their thickness. In case they require to be pressed, these small pieces are returned to the glass-maker, who moulds them very nearly into the shape they will have finally. After being moulded, they go back to the optical grinding-room.

A trial-lens is now prepared according to the computations for its form and material—a task often demanding an extremely tedious labor of months. This trial-lens is tested in every way to see whether it meets the requirements. If the testing turns out successfully, a large number of similar lenses will be made. This manufacture involves both optical and mechanical problems: the first in the preparation of the lens and, the second, in making the mounting.

The optician again examines the pieces returned from the glass-maker which correspond nearly in size and thickness to those of the lenses

to be made. He then trims off the edges with a pair of pincers till they are circular in shape; the grinding then begins. The first grinding consists of rubbing the flat surfaces of the glass-disks against a rough-grinding-ball or cup turned mechanically. With one hand the workman presses on the revolving disc, the profile of which gradually takes the desired curvature, while with the other hand he throws damp sand on it, emery or carborundum from time to time. When this operation is finished, the glass undergoes repeated treatment with emery, the grain of which becomes finer and finer, until the finest is used before polishing. Whether this is done by hand or by machine is immaterial, as the different phases of the work are the same.

In mechanical polishing, so far as the size of the lenses will permit, several glasses are fastened to the ball or head by means of a special cement; the other part of the apparatus carries the polishing pad. If a convex curve is desired, the glass must be fixed on the convex form; if a concave curve is wanted, the concave cup must be used. The two parts of the instrument are mounted on the lathe, one over the other, the lower part being immovable while the upper one is given a rotary motion and the polishing proceeds. During the grinding and polishing the workman measures the lens frequently with accurate instruments to see if the curvature and thickness are right.

Polishing with paper is done by hand. An apparatus holding a special polishing-paper is mounted on a vertical lathe, and the workman gives it a rotary motion with the left hand; with the right hand he presses the glass (which is mounted on a simple piece of cork) until it has received the desired polish. The workman assures himself of the progress of the work, using a magnifying-glass by which he can see whether all roughness has disappeared.

Polishing with pitch is used on all good lenses, and is done on a lathe. Opticians have employed it for a long time and in the course of years many improvements have been made in the process. This lathe has the advantage of leaving both the operator's hands free, as the rotary movement is given by two pedals as in a sewing-machine. There are also other models that work mechanically. The copper-cup is attached to the rotating spindle that turns in the cup of the machine and is supplied with specially prepared pitch.

While the polishing is going on, the workman puts some jeweler's red rouge mixed with water on the brush, sets the lathe in motion with his foot and presses on the ball and the glass. This gives the lens a very brilliant polish. During

the course of the work, the operator verifies the curvature by comparing it with the standard previously prepared. This model, which is made of ordinary glass, is laid over the worked surface and shows the so-called Newton colorings. These will be concentric and correct only when the piece being worked is correct. If the rings that approach one another overlap, it is wrong. By the application of this physical phenomenon, therefore, the optician can know certainly and on a scientific basis whether the lens he has prepared conforms to the theoretical standard or not.

The round exterior form holds the glass in the paper process during the first grinding. In the Weiss method, this is done either at the beginning or at the end. In any case, the glass is fixed by means of a special cement on a wooden disc which is screwed firmly in the lathe. On the inside of a channel or bent tin of the desired diameter, which the workman holds in his right hand, with his left he turns the glass, at the same time constantly sprinkling sand on it. This process is called "edge-grinding."

Now, each lens must be centered on the precision-lathe with pedals. A plate corresponding to the diameter of the glass to be centered is screwed on the front of the lathe, and the glass is fastened to this by means of warm pitch. Near the lathe is placed a lamp or candle or some other light. During the rotation of the lathe, the surface of the lens gives two flickering reflections of the light until, after repeated adjustments, the glass is centered and the light remains steady. After the interior centering with the light is done, the outer edge is ground by rubbing the glass against a copper plate. The lens is centered properly when a bright object reflected on its surface remains perfectly steady while the lens is turning; if not, the reflection turns with it or "strikes."

This completes the work on the lens. In order to mount it—which, we would say in passing, is generally done only when they are ordered, they otherwise being kept unmounted—they are placed in metal-mountings of ordinary construction. These must be painfully exact in all their parts: the screw-threads must work neither too hard nor too easily, so that the parts will all unscrew readily and not stick tight. Correct centering is also necessary here. The lenses must be placed in the mountings in their correct positions and at proper distances apart, and none may pass in an uncentered or out of parallel condition.

In blacking the interior of the mountings, they are heated with wood-charcoal dipped into nitric acid and then well smoked over a fire. Finally, when cool, each piece is brushed and

varnished inside with a mat or glossy black as desired. The lens is then ready and it only remains to polish them up and engrave the names, numbers, etc. on them.

From the foregoing, it will be seen that the making of a lens demands highly scientific work which can be done only by especially skilful and experienced workmen.—*Wiener Mittheilungen*.

Photographing an Old English House

CARINE AND WILL CADBY



WE have had the pleasant work lately of photographing an old house. It is a beloved old house, too, and the owner suggested that we should not be in a hurry, but give it leisurely and sympathetic treatment. Before beginning, we had imagined ourselves taking six or eight negatives, for which a couple of visits would see us through. But the owner was wiser. He knew that, once we came under the spell of this enchanting old building, we should find a leisurely and extended treatment the only one possible. For an old house like this is a beautiful model, it is continually tempting us with the sight of fresh angles, and so drawing plates from our bag. Instead of our six or eight negatives, we took sixteen distinctly different views.

But before going into how we made our pictures, we had better describe the house itself. Built as part of it is, in the fifteenth century, on the site of a still older edifice, mostly from bricks and worked stone that were ancient even then, it became the home of rich and distinguished people, and, no doubt, high revels were carried out in its halls. But with the vicissitudes of time it degenerated into a farmhouse, and much of the beauty of massive beams and carved mantels was veiled through the fancy of successive tenants, who, in the usual way of a certain period, painted or plastered, or whitewashed it all out of sight. It has been the present owner's congenial task to rediscover all the old features of the building, and with much labor to bring them again into sight. In doing this, passages that had been walled up for centuries were unearthed and restored to their original uses, oak paneling was scraped clean of paint and whitewash, and massive old beams, that still carry their allotted weight with ease and distinction, were brought to light.

Our first photographic thoughts were directed to the distant view of the house, seen across lush meadows where the pedigree herd of Shorthorns (the great beef-breeders) grazed. As

the owner pointed out, it was far and away the best position for a general view; but as the house was so far off from the high ground beyond the fields, it always came out as a mere dot in the picture. Of course, the obvious remedy was to use a telephoto lens, as no amount of enlarging from a direct photograph, made with an ordinary half-plate ($4\frac{1}{4} \times 6\frac{1}{2}$ inch) lens, would have sufficed. Consequently, a fine, bright morning was chosen, the cattle, as if by intuition, wandered into the right position, and the result is shown on page 72. With an Adon telephoto lens stopped down to stop No. 4, the exposure worked out at a little under a second, so that we were able to get our picture without the animals moving unduly.

A very old corner of the house with the Rose Garden in front was easy to photograph, as the lawn extended a long way back, giving plenty of space to place the camera exactly where it should be. But when it came to making a view of the whole length of the south front to include the stone and tile terrace, our difficulties began. We were working with a half-plate camera fitted with a seven-inch Zeiss Tessar, intending to make the finished prints about double size by enlargement. But with this arrangement we found it impossible to include as much of the view as we wanted, for, if we backed the camera, we were immediately among the trees. Not having a battery of lenses of various focal lengths, we had to substitute the whole-plate ($6\frac{1}{2} \times 8\frac{1}{2}$ inch) camera for the smaller size, using the same lens on the whole plate which it easily covered.

Our next trouble with this same view was that, even with the tripod set high, the terrace did not show sufficiently; so a table had to be used, and from this rickety eminence, with the tripod stretched to its longest, the exposure shown on page 73 was made. Being so near to the subject, and withal so near the lower part of it, the swingback had to be employed to get the vertical lines right, and the lens required stopping down to F/32 to obtain a reasonably sharp focus over the whole picture.



TELEPHOTO-VIEW OF OLD HOUSE

CARINE AND WILL CADBY

We soon found when we came to study the interiors that it would be necessary to use the large camera with the short (7-inch) focus Zeiss on all of them, because of the impossibility of otherwise getting far enough from our view so as to include all we wanted, so we stocked big plates and set to work.

The hall, being the most interesting, important, and difficult room, was photographed first. In the days of the farmer occupants it had been partitioned up into several small rooms. When the divisions were removed, it revealed the old, simple structure. We made two views of it. One shows how all the rooms open into it. On the extreme left is the way to the kitchen and a glimpse of the dining-room. Next comes the staircase, then the door into the morning-room that leads out into the garden. And on the right we have the panel door half open, through which the drawing-room can be seen. The other picture, shown on page 74, gives a corner of the opposite end of the hall, showing the chimney-corner, still spanned by the original beam, which is cracked in places by the fires of many years, but strong as ever. In doing this photograph, the chief difficulty arose through the two windows that had to be faced by the camera. They illuminated bits of the room too strongly, and, at the same time, threw the other parts into impenetrable shadow. For this reason, the curtains were drawn. This improved the effect,

but immensely increased the exposure, for at its brightest, the hall is dark and sombre. And this brings us to a point where we wish to remind the beginner of the absolute necessity of an actinometer for such work. We used the Imperial No. 2 exposure-meter, which is specially arranged for use with interiors, as the sensitive paper is four times as rapid as that supplied in the No. 1 pattern. The measuring of the light by this extra-rapid paper cannot be quite so accurate as with the slower sort; but it is near enough for practical purposes in a very dark room. The meter was set up on the chair in the far dark corner of the room shown in the photograph, and we then set to work to compose our picture. By the time we were ready to make the photograph, the meter had colored to match the pattern and, with the lens stopped down to $F/32$, the exposure came out at forty minutes. We gave fifty, and had no cause to regret our generosity.

The other, or sunny end of the hall, was photographed on another visit, as it was necessary to choose a cloudy day, or the sun shining it might, or might not, have made a fine effect; but would certainly have prevented a detailed rendering of the room, which was our object. Afternoon was the best time for this picture, as then most of the light was coming from behind the camera. This was exposed for over one hour, but the light of a late autumn-afternoon



CORNER OF HOUSE
WITH ROSE-GARDEN

CARINE AND WILL CADBY

was none too long for our purpose, and we felt when we closed the lens, and the place was almost in darkness that we had certainly not erred on the side of overexposure.

And here, perhaps, a word as to development would not be out of place, as these two negatives were the most difficult of any of the subjects we had to photograph. Old photographic manuals used to impress on the beginner the importance of *exposing for the shadows*. Excellent advice; but in the case of contrasty interiors, even if it is observed, we may yet spoil our negative in development if we use a strong solution. Our dark corners will no doubt be full of detail; but for all that they will print black before the lighter parts of the picture have reached their proper tone. It is too long a scale to expect of photographic printing-processes. So while bearing in mind to expose for the shadows, we must, so to speak, remember to develop for the high-

lights. In the case under discussion we used normal developer one part, and water four parts, and settled down to a slow but satisfactory task, knowing that our highlights were not piling on too much density while the shadows were getting detail.

The other pictures shown offered no particular difficulties. The dining-room had a long and high window behind, and to the right of the camera, so the light was fairly evenly distributed over the whole subject, and the exposure was only a matter of two and one-half minutes. The timbered passage, the subject the owner of the house liked most of all, shows a rediscovered bit of the house that had long been walled up and out of sight and use.

The chief points to remember in doing this sort of work are: Always to measure the light by an actinometer; to choose sunny lightings for the outdoor subjects; to photograph the interiors on cloudy days, and even if the sun be veiled,



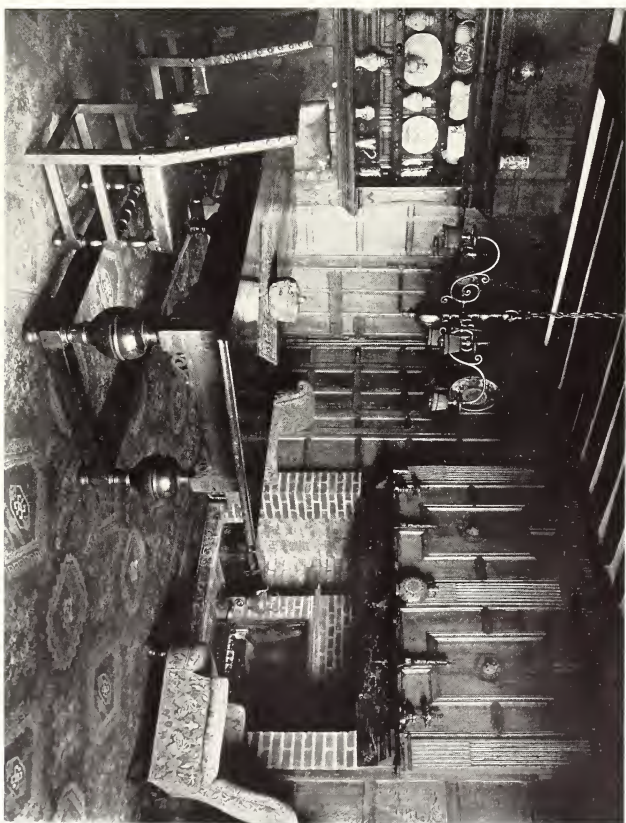
THE SOUTH FRONT

CARINE AND WILL CADBY



THE HALL

CARINE AND WILL CADBY



THE DINING-ROOM

CABINET AND WINE CUPBOARD



THE TIMBERED PASSAGE

CARINE AND WILL CADBY

not to attempt a subject which faces south or east in the morning, or west and north in the afternoon, otherwise unnecessary difficulties will be incurred; to use a light-shade on the lens for all the photographs. This is especially important where long exposures are necessary, and, lastly, to give very full exposures for dark interiors, and to use a diluted developer.

These notes are the result of our experiences

which, we hope, will be a sort of stepping-stone to any one who is going to photograph old houses, or modern houses for all that, if they are well designed.

This branch of photography is so interesting that, if we can save the beginner from tumbling into the pitfalls and making the mistakes that marked our own beginnings, this little article will have fulfilled its purpose.



THINGS should not look as if they were brought together by accident and for the moment but should have an innate and necessary connection. I want the people I paint to look as if they were dedicated to their station—as if it would be impossible for them to ever think of being anything but what they are. A work of art should be all of a piece and people and things should be there for an end. I wish to put all that is necessary, strongly and fully—indeed, I think things had better not be said at all than said weakly, because weakly said, they are, in a manner, deflowered and spoiled; but I profess the greatest horror of uselessness, however brilliant, and filling up. Such things can have no result but to distract the attention and weaken the whole.—*Jean François Millet.*

WHILE no hard and fast rules can be laid down governing the size and proportions of the mount, in a general way, it may be said that the farther away the print is supposed to be seen, the wider the mount should be. A print full of minute detail demanding a close view, requires a comparatively narrow mount. The reason for this is that one function of the mount is “to surround the picture with a space of silence,” as Ruskin said; or, in other words, to blot out all details in the immediate environment of the picture which would otherwise constitute its background. The eye is conscious of a larger area of the surroundings of a distant object than of an object seen at close range, hence a picture like Alexander’s Pot of Basil requires almost no mount at all.—*Photography and Fine Art.*

The Danger of Inadequate Fixation

WILFRED A. FRENCH



IT is well known that sodium hyposulphite is inclined to precipitate when in solution; whereas the partly exhausted salt, being heavier, is disposed to accumulate at the bottom of the fixing-tank. Fixing-baths which have been nearly exhausted, still possess the power to fix plates; but this is confined to the upper portion of the solution, whereas the lower portion is impotent. Such a bath ought to be set aside for a day or two, the upper portion carefully removed and poured into the fixing-tray, to be strengthened by a fresh hypo-solution. Workers who use flat dishes in which to fix their plates, do not run the risk of uneven fixing; but those who use deep, narrow tanks are apt to submit their plates to uneven fixation at the top, but insufficient at the bottom. This gives rise to uneven fixing and, eventually, to discoloration of the film. A good way is to give the fixing-bath a thorough shaking up, several times during the day, or just before inserting a new batch of developed plates. This will impart to the fixing-bath a homogeneous and evenly acting quality. The subject of the fixing-bath has not received adequate attention from the average photographer—amateur or professional. So long as the plate is clear and will yield good prints at the beginning, that seems to be all that is neces-

sary. But when, after the lapse of years, the negative is taken out of the envelope for the purpose of reprinting, it may be discovered that it has become discolored wholly or in part, and such discoloration is almost impossible to remove; or, it may be found that the image has faded to a greater or less extent. Workers who desire that their negatives remain available for many years to come, will do well to give particular attention to the fixing. On the surface, the process of fixing plates appears to be the simplest of all photographic operations; but, unless cared for intelligently, it may prove decidedly detrimental to the permanence of the negative. A chrome-alum fixing-solution composed of impure ingredients may justly be regarded as a source of anxiety. If the photographer has reason to doubt the purity of the constituents—chrome alum and sodium sulphite—and has no means to test them, he may resort to a fixing-bath that contains only plain hypo, and this commodity is easily available. Even so, it will be well not to prolong its life unduly, but to discard it after a reasonable period of use—saving the dregs for the silver—and prepare a fresh bath. Staining of the negative can also be avoided by the use of Metol and other developing-agents of the para-midophenol family, which, to the credit of American chemists, are now made in this country.

A Method of Locally Printing-Up Dense Highlights



AS ES occasionally arise due to over-development of the highlights in negatives, particularly when coupled with underexposure, when high-light-details remain unrecorded in the print, for the reason that if printing be conducted to a stage to render such details, the shadows, or even the halftones, may be buried or solarised. Perhaps the commonest examples met are white dresses in out-of-door groups, where the lighting cannot be controlled. Faces, often shielded by large hats, necessitate development being carried to the point of obtaining an appreciable deposit of silver, regardless of blocking up the highest lights, says the *British Journal*.

The well-known expedient of covering the back of the negative with mat-varnish, and

scraping the latter away over parts that require printing up, is often extremely useful, but the holding-back power of the varnish is but slight, and quite inadequate in many instances. Tinting the varnish yellow or orange is another familiar dodge to meet more extreme cases, but here a difficulty arises in making the depth of the tint and its consequent power of arresting actinic light fit the particular case. If the varnish be too strongly colored the highlights will become degraded by the time the rest of the negative is fully printed; on the other hand, if insufficiently tinted the remedy is but partial, and at the best is limited in scope.

With "daylight" printing processes "flashing" the paper after printing often saves the situation, but can only be employed usefully when some

light-action has taken place through the dense parts of the negative. Then detail can be retained which otherwise might disappear in the subsequent operations, but obviously, if no light-impression exists in the first place, it cannot be created by this expedient.

In most cases the missing detail is supplied by brushwork on the prints; but if more than an indication is required, or if actual drawing is demanded, this method is apt to betray its origin. For the sake of completeness may be added the inspiration of a "burning-glass" for focusing the image of the sun on those parts of the negative from where (*inter alia*) it is desired cracks shall start. There is also local printing-up of bromide papers by means of a tiny "flashlight" electric bulb, or even a lighted match.

The way to be described has only been applied to "daylight" printing-papers. How far it is applicable to bromide papers cannot be said, for it has not been tried, but probably it would work with a well-diffused light-source and with trifling modifications to meet the altered conditions. It is not suggested that it is new in principle—indeed, the contrary—but the exact procedure may have points of novelty, and be employed with advantage when negatives of the type alluded to are met with, and handwork is not desired, or desirable, on the prints.

The elaboration of an old idea originated many years ago when some slightly underexposed and hideously overdeveloped 10 x 12 negatives, interiors of a mansion, had to be printed in platinotype. Highlights of varying intensity, such as windows, white statues, etc., abounded, the most opaque taking a full day to print, and the halftones and shadows attained correct depth in twenty minutes or so. The negatives were hopeless printers, yet by placing a little paint on the glass-side and printing-up the highlights in the way now to be shown, satisfactory results were ultimately obtained in semi-automatic fashion—that is to say, printing by time to mercury-light. If to daylight, a print-meter would have sufficed, if not so convenient.

For the sake of illustration a simple example may be taken—that of a lady in a white dress, assuming that in the negative the blouse is so opaque as to refuse to render any detail in a straight print, and that the skirt records details only faintly. Therefore both will require printing-up, the blouse more so than the skirt.

The negative is first attached firmly to a card-carrier, let us say a $6\frac{1}{2} \times 8\frac{1}{2}$ negative in a 8×10 carrier, and two squares of white paper are stuck down on the carrier, close to the edges of the glass-side of the negative.

The negative—glass-side out—and carrier are

placed on a retouching-desk, a piece of orange paper slightly larger than the negative is adjusted over it, and the dress is traced round roughly with a pencil well beyond the outlines. The paper is removed, the outlines cut out, and the openings covered with a sheet of adhesive dry-mounting tissue, which is fixed with the iron. The orange paper is readjusted to the negative, secured temporarily by gummed paper, and two registering lines are ruled as indicated in the diagram. The dress is now gone round with a brush filled with opaque pigment, this time well within the outlines, which are quite easy to follow, even if such a thing as a bouquet held in the hand of the subject makes them intricate. Any central parts which print decidedly are covered with the paint.

The skirt, printing quicker than the blouse, is held back by an additional piece or more thicknesses of the tissue as required, and isolated parts can be further slowed by small attached pieces. A vignetté edge can be obtained by slips, each piece projecting a trifle beyond its neighbor—in fact the tissue permits wide control in many directions. The hot iron, naturally, must not be applied to the mask *in situ*, for fear of fracturing the negative; but as the mask can be removed readily and restored in exactly the same position by the registering lines, all that is necessary is to cut any pieces of tissue decidedly on the large side, and to indicate the correct cutting lines by the brush. Ordinary opaque adheres badly to the adhesive tissue, but a little ground black mixed with spirit-varnish, thinned with methylated spirit if necessary, adheres well and dries quickly.

The negative and card-carrier are inserted in a printing-frame with plate-glass front, and printed "straight" for the requisite time. The mask or template is then placed over and registered, secured by a weight, and the dense highlights are printed up. Owing to the interposition of the plate-glass and the glass of the negative, an appreciable distance separates the mask and printing-paper, and prevents hard lines. In the case of small negatives, and small patches requiring correction, this distance may be found too great; thinner glass should then be employed.

Of course, this method has its limitations, for if really decided tints were required to be printed in on parts initially unaffected by light-action, vignetté edges would be visible. Luckily, the conditions usually demand only faint tints on such parts, and but a small increase of vigor and detail to the images formed under less dense highlights, so that any vignetté edge is generally of such a faint character as not to be apparent or noticeable.



William Ludlum

Waiting.

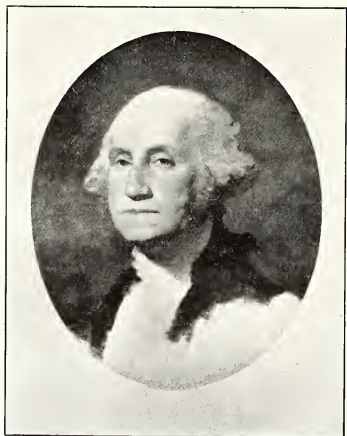
William Ludlum.

Somewhere—beside a river's bank,
Beneath a branching tree,
A little boat is anchored fast
And waiting there for me.

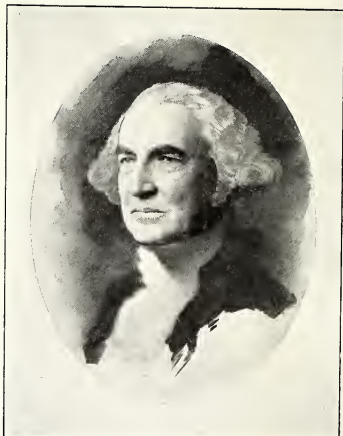
Just where that river is, or when
I sail—I do not know,
And neither do I ken the port
To which I voyaging go.

But when the time for sailing comes,
Be it by night or day,
Unfaltering I will take my place
And bravely sail away.

The mists that now obscure my sight
Will lift and I shall see
The Pilot and the Port that wait
My little boat and—me.



From Photographure
A. W. Elson & Co., Belmont, Mass.



Courtesy of
Boston Evening Transcript

An Historical Parallel in Portraiture

WILFRED A. FRENCH, Ph.D.



LD subscribers to this magazine may recall the World's Fair Number of PHOTO-ERA, published in October, 1904, which had for its chief feature a number of portraits of prominent American photographers costumed to represent famous portraits by the old masters. A similar caprice was indulged in, recently, by George Alfred Williams, an artist of New Providence, New Jersey, when he discovered a remarkable resemblance between the features of Senator Warren G. Harding, and those of George Washington as shown in Gilbert Stuart's well-known portrait of The Father of his Country. The result of Mr. Williams' caprice was published originally on June 19, 1920, in the *Boston Evening Transcript*, and now through the courtesy of that paper, PHOTO-ERA presents herewith a photograph of Senator Harding transformed into a Stuart portrait of George Washington. In publishing the result of this similarity, we make no apologies—as might be the case, were Mr. Harding not the splendid type of American that he is. Our readers may be interested to read the artist's remarks which accompanied the sketch of Mr. Harding in the character of George

Washington: "I was sitting in my studio reading the *Transcript* of June 14, when I was at once struck by the very remarkable resemblance of Senator Harding's features to those of Washington. For the amusement of it, I cut out the Senator's portrait, and mounted it, drawing around it the general background of the Athenaeum Washington, by Stuart. The parallel to me is very striking." At the same time that Mr. Williams' letter was received at the office of the *Boston Transcript*, Mrs. Maria Waterman, of Watertown, Massachusetts, wrote to the *Transcript*: "The face of Senator Harding looks like the face of the Father of his Country. Put a wig on him and you will see a new George Washington." At this writing, I hear that other readers of the *Transcript* have written to the editor that they had noted the resemblance described by Mr. Williams and Mrs. Waterman.

By comparing the transformed photograph of Senator Harding, by Underwood and Underwood, with the adjoining reproduction of Stuart's portrait of Washington, our readers will be enabled to indulge in prophetic speculation; for these two pictures tell their own simple, curious and, possibly, significant story.



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WARREN G. HARDING
MOFFETT STUDIO



ELYSIAN FIELDS VISTA
DAVID J. SHEAHAN



EDITORIAL



Portraits of Our Public Men

MOST persons, whether in public or private life, have the natural desire to appear at their best. Consequently, the photographer exercises his skill in producing portraits that will please and satisfy his patrons. If he is an artist and can afford to assert his individuality of characterization, without impairing the likeness, so much the better for his reputation and success. In the extremely realistic portrait, or one that is devoid of all artistic quality, PHOTO-ERA is not interested, despite the fact that it represents just the sort of thing that newspapers and magazines publish of our public men. That many of these portraits are so bad as to give one an entirely wrong impression of the subject, seems not to have been considered, so long as they are of the whitewash-and-soot variety. The fact that many of these portraits are produced without any preparation—just snapshots, as it were—is sometimes urged not merely as an excuse for thus perverting the human physiognomy, but as a positive compliment, and to give the people an impromptu, unstudied, perfectly natural likeness of the individual. Such an intention is laudable, and would receive our approbation, had the photographer exercised some skill in lighting and in the subsequent development and printing. Thus, a face expressive of the high character of its owner, is unwittingly made to represent one of ignoble traits, and all the superlatives in the world, used in extolling a public official, will fail to neutralize the unfavorable impression created by a poorly executed portrait.

In the case of a picture of a candidate for public favor, the question of a favorable and characteristic likeness becomes all the more important; for upon it depends a large degree of success in the winning of friends and supporters. Of the several portraits used and distributed by the campaign-managers of General Leonard Wood, not one did him full justice. To be sure, an appointment was made at the studio of John H. Garo; but unfortunately, the distinguished candidate was not available. Thus an opportunity to secure a telling and artistic portrait was lost. It generally happens that when we meet the subject of a spiritless, inane or deceptive picture of a distinguished man—unless he be a member of the theatrical

profession—face to face, and look into his eyes and hear his voice, we are happily disillusioned, and wonder why the wrong sort of likeness was ever allowed to be published. Surely, the candidate for so responsible and exalted an office, as that of the President of the United States, merits all the pains that can be taken to ensure a portrait that shall express or, at least, suggest the stuff of which the subject is made. It can be done, provided that a master-photographer performs the task.

As regards the portrait of Senator Warren G. Harding, the Republican candidate for the Presidency—which appears on another page—this product of the Moffett Studio is, indeed, admirable. It pictures Mr. Harding looking straight into the camera, and reveals his kindly, sympathetic nature, breadth of mind, and strength of character. It also suggests the rare administrative ability of the man whom we had the privilege to meet and talk with, after hearing him deliver his remarkably interesting address at the dinner of the Home Market Club in Boston, May 14, 1920.

The Value of Shadows

ONE of the principal factors in artistic photography is shadows. Their value depends upon intelligent selection, which preferably should be made during periods several hours before or after the sun crosses the meridian. Not all shadows are desirable. Their usefulness in the attainment of a certain object depends upon their size and character. A shadow that impairs the beauty of a portrait should be avoided, either by changing the direction of the light or by modifying its intensity. A face that is so lighted that the nose casts a deep-black shadow across the mouth is grotesque, and is neither pleasing nor artistic. Strongly lighted as are the portraits of Rembrandt and Velasquez, there is nothing objectionable about the shadows. In landscape-photography, shadows serve to relieve the monotony of bare spaces in road, meadow and hillside, and to bind together individual objects and masses—imparting a feeling of unity to the picture. An object, such as a single tree, a statue or a human figure, will very often yield a pleasing composition by means of a well-directed shadow.



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Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.**

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Miscellaneous Competition Closed May 31, 1920

First Prize: Dr. J. B. Pardoe.
Second Prize: Kenneth D. Smith.
Third Prize: F. H. Chant.

Honorable Mention: A. C. G. Allison, Donald R. Battles, Harry Beeler, Jr., D. H. Bissell, Joseph Bonanno, Charles Burrows, P. Botel, Louis F. Bucher, Paul S. Carden, J. E. Carson, George W. Case, Daise B. Chapell, Alice M. Clark, Warren E. Crabtree, Lewis P. Craig, J. Louis Cunningham, H. P. Dahlen, B. C. Durfee, C. R. Dyer, Mrs. W. F. Eldridge, Thomas Farmer, Harry Footner, Oliver Frantz, George W. French, George M. Gerhard, Agnes E. Goodbody, Charles Glein, Herbert J. Harper, R. D. Hartman, A. R. Hazard, Arthur T. Henrici, Theodore H. Housel, Charles A. Hughes, Henry A. Hussey, A. B. Imlach, V. Max Kemery, Hannah Knight, Charles P. Logan, Irving S. Lovegrove, Sophie B. Marchant, Stephen Marsh, F. J. F. Marty, Alfred Melina, T. S. Morimoto, George S. Nalle, Carroll B. Neblette, Ozan K. Nunome, Robert P. Nute, T. P. Payne, L. Piatier, W. E. Potter, E. M. Pratt, Edward Reisser, Neilson Rittenhouse, H. B. Rudolph, N. H. Schammel, Edwards H. Smith, G. A. Smith, Alfred S. Upton, Samuel P. Ward, The Walters, Elliot Hughes Wendell, Clyde L. Williamson.

Subjects for Competition—1920

"Rainy-Day Pictures." Closed April 30.
"Miscellaneous." Closed May 31.
"Speed-Pictures." Closed June 30.
"Rural Scenes." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.



FAIR AUTUMN

DR. J. B. PARDOE

FIRST PRIZE—MISCELLANEOUS COMPETITION

Arrested Expression in Portraiture

MUCH has been written with regard to the method of obtaining a generally satisfactory expression of the sitter in portraiture. The world-wide appeal for a pleasant expression and, particularly, the perfunctory request of the camera-artist, "Look pleasant, please!" are closely associated with photographic portraiture.

There will always be a difference between the expression aimed at by the professional portraitist who has the double motive of satisfying the sitter and preserving his own artistic reputation, and the amateur whose chief aim is to please his model-friends. However, the letter addressed to the editor of *The British Journal* and reprinted here, will be of much interest to the general practitioner. The remarks made by the editor, which follow, are likewise illuminating.

"I read often in the *British Journal* articles re-

ferring to ultra-rapid plates, underexposures, and various ways and means of getting high-class negatives. I grant that a pretty slow plate and long exposures give a much better result for any subject in the studio, but from a commercial point of view surely the sitter deserves some consideration. Nearly everyone looks upon being photographed as a fearful trial. Why? Because most photographers pay more attention to arrangement of dress and pose and getting good negatives, missing what to my mind is the chief thing in any portrait—the expression. It is no exaggeration to say that 99 out of every 100 photographs that one sees have the same set, 'photographic' expression. It is the sort of expression that seems reserved especially for photographers, for how very often one sees a beautiful photograph, perfectly finished in every way—quite a work of art, in fact—but utterly spoiled by that same set expression on the face, whether serious or smiling. The main points to my mind, when



THE HIGHWAY

KENNETH D. SMITH

SECOND PRIZE — MISCELLANEOUS COMPETITION

photographing sitters, are to try to make them forget that they are being photographed. Never let them know the actual moment when you make the exposure. Avoid fussing about the sitters, and, above all, make them feel at home.

Just as an example of what I mean, how many times have you sent out a batch of proofs and you in your own mind have picked out one position as being the best in every way? How many times has it been best in every way? How many times has it been returned not ordered from? Why? Because the expression was all wrong, and, put it how you will, the expression is what people judge on. This is the sole reason why I always use the fastest plate I can get. If I could I would never give an exposure of more than 1-10th of a second on any sitter—man, woman or child. Groups are an abomination for this very reason, as it is impossible to watch more than one person for this all-important point—expression.

This is the pith of the whole thing. Let photographers make expression the chief study, and remember it is impossible to 'hold' an expression for more than a fraction of a second. Why is it that actors and actresses always photograph well? Because they study expression; they know the expression they want, and they mostly get it.

There are many photographers up and down the country who do make a great study of expression, I know, but there are so many more who never give it a serious thought. When they do, I am convinced that our splendid art will be the better for it and there will be less talk of the terrible ordeal of being photographed.

EXPRESSION."

To this, the *British Journal* replies, as follows:

"It is difficult for anyone to dissent from the views expressed by our correspondent to the effect that likeness is the quality in portraits which chiefly recommends them to the photographer's customers, and to the getting of which more attention deserves to be paid. But when it comes to the means by which this is to be done, there may be several opinions. Our correspondent seems to suggest that the reduction of exposure to such a fraction of a second that the photographer can secure his negatives without the sitter's knowledge is necessarily a solution of the problem. The opinion assumes the ability of the photographer to recognize with very great rapidity what he considers to be a pleasing and true expression, and it also assumes that such arrested expression is more likely to be characteristic of the sitter than one which the mind memorizes in viewing a person for some much greater length of time. We do not think that the rapid exposure is by any means an infallible way or the only way to good expression. On the other hand, we call to mind the practice of some remarkably successful 'individual' portraitists of giving exposures not less than 10 seconds on the ground that during that time there is the opportunity for a certain blending of expressions which gives a truer account of the sitter than could any momentary snatching of his features as they appeared in only a tenth or a quarter of a second. Even in the case of children, we fancy that we recollect Mr. Speaight having said, some year or two ago, that he found it necessary to give an exposure of at least three or four seconds in order to secure the most pleasing expression in a child's portrait."



THE LONE TRAIL

F. H. CHANT

THIRD PRIZE—MISCELLANEOUS COMPETITION

The Covering-Power of a Lens

WHEN the "covering-power" of a lens is spoken of—explains a cotemporary—two distinct meanings have to be taken into consideration, one being the diameter of the largest circle which the lens will project upon the groundglass at its principal, or, as it is more commonly called, its infinity focus, whereas the other is the diameter of the circle which is sharply defined. Through not differentiating between these meanings, unscientific lens-users have often been disappointed. It is often said that reducing the lens-aperture increases the covering-power, and this is quite true if we take the second meaning; but as far as the size of the circle of illumination is concerned, the contrary is sometimes the case. There are certain excellent lenses which have the diaphragm so placed, that the field is reduced when the smaller apertures are used. Another misconception as to covering-power frequently arises when copying. There are still many photographers who believe that, when making an enlarged copy, the lens used must be capable of covering the plate in normal circumstances, whereas the truth is that it need only be able to cover the area which is to be enlarged from.

Coloring Direct from Nature

WHAT pleasanter occupation can there be during the warm and sultry days in August and September—when working in a stuffy darkroom is anything but a pleasure—than to sit under some shady tree, else under a large umbrella, and color an enlarged print of the view made on the very spot a short time before! It is also much more practical to do it in this way, rather than from memory—as would be the case indoors during the winter-months.

Moreover, to color the photographic print attached to a board resting on an easel—from nature, out there in the open, using brushes and a box of standard American colors, such as Devoe and Reynolds—gives the camerist the feeling that he is temporarily, at least, a professional painter. Although, for the time being, free of the oral "bull" of the inquisitive "snapshot-fiend," the busy artist is still subject to possible attacks from the other—the pasture-variety of bull. For this reason, it might be well to equip the easel with a mirror, such as is used on automobiles, that the approach of the enemy may be better observed. If mosquitoes—but why take all the joy out of life?



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



FORTUNES TOLD

A. E. CHURCHILL

Advanced Competition—Outdoor-Genres Closes September 30, 1920

THE subject for this competition is a particularly appropriate one for this time of the year. Most amateur and professional photographers will be able to enjoy a few days in the country or at the seashore and others will have to make the most of week-end trips. Unfortunately, there are those who cannot even leave for a week-end trip and these must rest content with subject-material that is available in city-parks and recreation-centers. However, no matter how limited the worker's time for a vacation may be, there are outdoor-genres to be had at his very doorstep—if he can get no further away. Certainly, at no time of the year are more cameras in active service, and at no time are the weather-conditions more propitious.

In considering the general subject of outdoor-genres, I believe it to be well to recall Webster's definition, "a genre is a style of painting, sculpture or other imitative art, which illustrates *everyday life and manners*." Do not overlook this point. Some outdoor-portraits *may* be genres; but a *true* genre could never be a strictly technical outdoor-portrait because a genre-portrait is usually more spontaneous and true to life than a formal portrait. It shows the subject smiling or even laugh-

ing, seated, perhaps, in a boat, hammock or motor-car. In short an outdoor-genre should represent the subject—be it man, woman or child—as the camerist finds it. Contestants may take my word for it that, to make a good outdoor-genre—portraying the subject as it is and, at the same time, with due regard to pleasing composition—requires no mean degree of skill. It is a severe test of technical and artistic skill, and this competition should appeal to ambitious camerists on that very account.

Before sending in prints, it might be well to look up the definition of genre in some authoritative book such as Poore's "Pictorial Composition and the Critical Judgment of Pictures." In a general way, we all know what the word means; but in this competition it is essential that we understand its exact significance, otherwise contestants may experience disappointment. My reason for emphasizing this point is to make clear that outdoor-portraits, landscapes, groups, etc., are not acceptable, no matter how technically perfect, or artistic in intent, they may be. The clearer that the correct definition of outdoor-genre is carried in the mind of the worker, the nearer he will come to winning a prize or an Honorable Mention.

There is a distinct advantage in planning carefully to send prints that are *true* outdoor-genres. By that

I mean that it is a wise step to decide upon one type of outdoor-genre and to concentrate on that to the exclusion of others. Obviously, those camerists who are at the seashore should not attempt to portray rural life, and those in the mountains should not attempt subjects of marine-character unless they happen to be near a very large body of inland water. Workers should make the most of what is at hand. In no case, force the issue. Take the subject as it is found and with individual brain-power and technical skill make it a beautiful picture. Let us suppose that the camerist decides to devote himself exclusively to an old fisherman who sits day by day on a tumbledown pier and dreams of clipper ships, whales and the "good old days." First, it requires diplomacy and kindness; second, many (not too many) attempts; and, finally, great care to select the print which best portrays the subject and expresses that which was in the mind of the camerist. In fact, it might require an entire season to obtain the right subject amid appropriate surroundings. Lest I be misunderstood, let me say that I do not infer that the camerist should use roll after roll, or dozens of plates, to obtain just the right result. What I do mean is that *whenever* he has this competition in mind, let him stick to one type of outdoor-genre; at other times, let him photograph other subjects that appeal to him.

There is virtually no limit to the supply of material for delightful outdoor-genres. Whether the available material is made into successful pictures is a matter that rests solely with the camerist. Children at play, harvesters at work in the fields, dairymaids, fishermen, gate-tenders, scissors-grinders, peddlers, traffic-officers, ferry-men, carpenters, plumbers, postmen; also relatives, friends and pets—all are promising subjects for excellent outdoor-genres. There are many good subjects that I have not mentioned; but I am sure that the worker can easily think of others that are as good as, if not better than, those I have listed. Again let me remind contestants to remember the definition of genre and to see to it that each picture illustrates some phase of *everyday life and manners*. For example, no real camper in his senses wears a blue coat, white flannel trousers and white shoes as he busies himself about the camp-fire, neither does he wear such apparel when he is fishing. It is well to remember that consistency is a jewel. Motion-pictures serve as excellent examples of the value of accuracy and the portrayal of characters true to the life. One can imagine how an audience would accept William S. Hart if he depicted the wild life of Alaska or the big lumber-woods of the north dressed in any manner other than true to actual conditions. He must have muddy boots, unkempt hair, ill-fitting clothes and a weather-beaten hat, otherwise he does not ring true. The motion-picture producers learned the value of accuracy long ago and we know to what expense they will go to reproduce famous places or buildings according to the very drawings of the original so that the audience may indeed feel itself to be in Italy, Africa or Paris—as the case may be. Unless the camerist makes a picture that he knows to be according to fact, it will not ring true and the beholder will fail to grasp the thought behind it.

Probably in no competition have the owners of vest-pocket and hand-cameras such an opportunity to use their outfits to advantage. In most cases the making of a good outdoor-genre lends itself to the unobtrusiveness of the small camera; and many a picture may be had that would be lost before an 8 x 10 view-camera could be set up. Moreover, such a large equipment is very apt to make the most accommodating subject ill at ease and "camera-shy." Even professional

models find it very difficult to gaze unflinchingly into the gaping maw of an 8 x 10 studio-lens and "register" spontaneity—unconcern and easy relaxation. How much more difficult it must be for some old fisherman or hard-working farmer. The more unobtrusive the preparations for all genre-photography, the better is the result. The more impromptu the making of the genre, the more natural and gratifying will be the portrayal. Unostentatious speed is a great asset. The quicker the picture is made—with due regard for exposure, focus and composition—the more the subject will like it and the greater the chances of ultimate success. Prolonged "arranging" of the subject or accessories should be avoided. The camerist should train himself to "size up" a situation quickly, to decide whether the subject and the setting meet his requirements, to make the picture and to go on his way without attracting undue attention to himself or to the subject. Many camerists have used prisms and other "camouflaged-methods" to photograph their subjects unawares and, no doubt, they do obtain interesting results. However, in most cases I am led to advise the camerist to win the co-operation of the subject first and then to proceed to make his picture.

Perhaps, no competition is better adapted to the individual artistic temperament of the camerist than the present one. He may elect or prefer to portray the pathos of the ghetto, the care-free play of children on the beach, the vigilant efficiency of the sturdy traffic-officer or the labor of the harvesters. In most cases, the camerist will make the best outdoor-genre of a subject that appeals to his heart as well as to his mind. Usually, a subject that fills the camerist with deep emotion, whether of sorrow or joy, will affect the beholder similarly. Of course, it is understood that the subject in question must have more than local interest. Its appeal must be general. A beautiful child, artistically and truthfully posed, is a subject that has universal interest; but the same child photographed in an environment which limits the interest to relatives and friends will fail to make a strong appeal to the beholder. It is true of photography as it is of painting, sculpture and literature that the subject of greatest general appeal is one that all may enjoy the world over. Such a picture will appeal as strongly to the people in Norway as to those who live about us. There is a tremendous satisfaction in doing or making something that will cause persons *everywhere* to acknowledge your skill and artistry. In this connection, let me repeat what I have said several times on this page and that is to remember always that the truly great things are invariably simple even in selecting a group as a subject. In short, they appeal to the most educated critic and also to the modest laborer equally. Any picture that can meet such a test, is a joy forever.

The jury is very eager to see if there is not some contestant who can send in a print that is new in theme and execution. From many interesting and profitable chats with amateur workers I am led to say that in many cases there is too much bashfulness—too much shrinking from giving out what is truly good and beautiful. Although we admire and have grown fond of our many old friends, we are eager to welcome many workers who are doing excellent work but appear to have "stage-fright" when it comes to entering a print in one of these competitions. We hope that all such friends and readers will pluck up courage and begin with this competition to be regular contributors. Our standards are high, we admit; but all the same there is a heart back of it all and we value and respect the efforts of every contestant whether known to us or not.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of **stiff corrugated board**—not the flexible kind, or with thin wood-veneer. Large packages may be sent by express.

Awards—Beginners' Competition

Closed May 31, 1920

First Prize: Charles T. Graves.

Second Prize: Harold B. Neal.

Honorable Mention: Albert A. Sterrett, John J. Griffiths, R. V. Koontz, R. H. Addison, George F. Hogan.

The Beginner and the Photographic Harvest

It is not too early for every beginner to bear in mind that in another month or two he will be called upon to give an accounting of his photographic work of the past summer. Friends and relatives will ask to see his vacation-pictures and will judge his ability as a photographer by the prints that he shows them. With modern equipments to use, detailed instruction-books to read, camera-clubs to attend and a large number of books to study, the beginner is hard put to find any excuse for slipshod work, that will relieve him of responsibility for failure to make at least a good technical print. I wish that we might eliminate that statement that is heard so many times, "Oh, that's only a snapshot," as if that were sufficient excuse for poor workmanship. I have all manner of charity for the beginner who makes honest attempts and, in so doing, does not always hit the mark. However, with regard to the beginner who makes the same mistakes, time after time, and always has some excuse for failure I do not feel charitably disposed. It seems to me that he is no credit to himself or to photography, and does much harm by giving the layman the impression that all amateur photographers are merely a useful asset to the manufacturers in that they use up thousands of roll-films, film-packs and plates. If a man joins a tennis-club, as a beginner, the older members are glad to offer the new arrival every assistance and encouragement so long as some improvement is noticed; but if the novice continues to ignore the kind offices of his fellow-members and plays no better game at the end of a few months than he did at the beginning, it is natural for others to lose interest in him, and he finds himself unpopular. The same point applies to the beginner in photography whether he is a member of a camera-club or merely a reader of the photographic magazines. We all take a keen interest in the man who tries hard, falls down, picks himself up and keeps at it until he wins out.

On a recent trip, there was in the party a young man who seemed to be very proud of a new Brownie camera. Every time that a subject struck his fancy, he would go about making the exposure in a very deliberate and solemn manner as if it were to be the very last picture he would ever make. An acquaintance called my attention to the young man and remarked in a rather sarcastic manner, "Thinks he's got a hundred-dollar camera from the way he makes those pictures. Why don't he snap away like the rest of us instead of taking five minutes to make one picture? He must be one of those fool beginners." I watched that young man during the entire afternoon and bided my time. Three or four days later I met my acquaintance and asked



HIS LITTLE PET

CHARLES T. GRAVES

FIRST PRIZE—BEGINNERS' COMPETITION

him how his pictures of the trip came out. "I got four out of the twelve exposures and that's mighty good for me," he replied. "You see," he explained, "I just snap away. If the pictures come out, all right; if they don't, all right. I should worry, because I can always buy good postcards of the places I visit!" Next, I looked up the young man and asked him what luck he had had. "You see I made only six exposures but everyone came out fine. Look here!" he exclaimed with boyish enthusiasm, "aren't these dandies?" And they certainly were. No matter what camera that young man may use eventually, he will make good pictures with it because he will have trained himself in the basic rules of good workmanship thoroughness and true progress. Unless I miss my guess, readers of this magazine and others will admire the young man's pictures before many months have passed.

It is not too late for the beginner to make up his mind to have something to show for the time and money he has put into photography. Remember that it is far better to have six good pictures than twelve that must be "explained." If results up to the present time have been unsatisfactory and there has been a strong tendency to blame the camera or the manufacturer, stop for a moment and be honest with yourself. Have you read the instruction-book carefully, are you sure that you have followed directions, are you positive that you held the camera straight, can you say truthfully that you did not move the camera, did you focus accurately and set the diaphragm and shutter-speed correctly? If you are sure that you have done all these—and other things—according to instructions, then write a courteous letter to your dealer

or the manufacturer. Cameras as made by standard camera-manufacturers are seldom out of adjustment or incapable of making a good picture when they are delivered; and it will behoove every beginner to be "slow to anger" until he is sure of his ground.

The photographic harvest time will soon be here, and it is the hope of PHOTO-ERA and its editors that every reader will have cause to be happy over the summer's work. "Nothing succeeds like success," is an old adage and applies to photography as well as to other human activities. When the long winter-evenings again cause us to gather around the sitting-room lamp, we hope that every beginner will be able to bring out his album and show *good pictures* to his admiring friends and relatives. It is no superhuman task. It is but a matter of taking a real interest in the matter and making up one's mind to produce results that are a credit to the maker and to photography.

It is not too much for the beginner to aspire to our Beginners' Competitions which are conducted solely for his benefit and with a view to help him gain sufficient strength to stand on his own photographic feet. A casual glance through a few back issues of PHOTO-ERA will show the very excellent work that has been done by beginners; indeed, many of our advanced workers were tyros not so very long ago. Let every beginner utilize the few remaining weeks of summer to advance himself photographically in every way possible, and I know from experience that the effort is worth the cost in time, patience and money. May each beginner reap bountifully at the approaching photographic harvest. He will surely do so, if he does his part conscientiously and effectively.

A. H. B.



THE SNOW-CAPPED PUMP-HOUSE

HAROLD B. NEAL

SECOND PRIZE—BEGINNERS' COMPETITION

Trimming Photographic Prints

WHITE margins are desirable for prints pasted in albums, or for record, as the print looks neater and stands out better. It is a simple matter to trim prints so as to leave an *exactly* even white margin all around, and do it rapidly and accurately.

Make this print with a mask, as usual, leaving a white margin larger than desired. No particular pains need be taken to have it symmetrical. Let us suppose that it is desired to have a margin a quarter of an inch wide around the print. Take an ordinary draughtsman's transparent celluloid triangle of large size, and on it scratch a line deeply with the point of a knife, exactly one-fourth inch from one edge. The triangle being transparent, the line scribed on it can be laid accurately on the edge of the picture itself and the print trimmed along the edge of the triangle with a knife, or a discarded safety-razor blade. By this means, the work can be done very accurately and quickly, no measuring being necessary. If different widths of margins are desired, other lines can be scribed on the triangle.

A safety-razor blade furnishes the most convenient tool for trimming the edges of the print and, if it is of the double-edged kind, there are four cutting-points available. No handle is necessary. Simply wrap the blade in several thicknesses of heavy paper to protect the fingers, leaving one end exposed, and go ahead. A rubber-band will keep the paper from unwinding. For trimming-purposes used blades, useless for shaving, are as good as new ones.

VAN ALLEN LYMAN.



Unscrewing a Tight Lens-Combination

FRIEND FRENCH:

I see in the June issue how to unscrew a tight lens-combination. I find that a good way is to smear a little fir-balsam on the brass-work, and also a little on the fingers, which gives a grip that is generally sufficient. It is also a good way to unscrew the back or front from a screw watch-case.

Yours respectfully,
WILLIAM H. BEACAR.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Radiography and Old Paintings

THOSE who have read PHOTO-ERA MAGAZINE, during 1912, will remember the highly interesting December issue of that year, which featured photography in the service of painting—a valuable and illuminating essay by W. H. Idzerda, accompanied by reproductions of the celebrated portrait of Elizabeth Bas, attributed to Rembrandt, and of an authenticated "Portrait of an Elderly Lady," by Ferdinand Bol, together with enlarged details of both paintings. This application of photography to the identification of masterpieces in painting of doubtful origin has proved of inestimable value. Now, however, comes the practical use of radiography, or the X-ray, in determining not only the authenticity of a painting, but in discovering the form and character of any detail that later has been painted over—a practice very common among painters from time immemorial. Although, strictly speaking, not a photographic practice, radiography, roentgenology, or the X-ray, as it is popularly known, has been applied with astonishing success, recently, as described by a correspondent to the *Quebec Telegraph*.

"A remarkable discovery has been made by Dr. L. G. Heilbron, of Amsterdam, which will doubtless prove of interest to many lovers and connoisseurs of art in Quebec, who are already aware of the results obtained in recent years in the art-gallery of Laval University by the expert cleaning up of valuable old pictures whose beauty and value had become largely concealed by the subsequent touching-up by later wielders of the brush, who vainly imagined that they could improve on the work of the old masters. Dr. Heilbron has found that the X-rays effectively expose these falsifications, especially when the colors used by the masters were denser than those employed by the falsifiers; the blacks, especially, of a more modern date, being found to be largely carbon and quite transparent to the X-rays. Dr. Heilbron has examined some sixteenth-century paintings, certain features of which were regarded with suspicion as possible later additions. One of these pictures, the 'Crucifixion,' by Cornelis Engelbrechtsen, painted about 1500, contained in the right foreground the portrait of a woman which, it was suspected, was that of a former 'donatrice,' who (after a fashion not unknown in those days) had thus sought to perpetuate her association with the picture. A radiograph of the painting showed many restorations, especially on the right half; and beneath the portrait of the donatrice was revealed the picture of a monk in surplice and stole, the head being smaller than that of the obliterating lady. The evidence was so clear, that the picture was sent to be restored at the Rijks Museum in Amsterdam, the result being to bring to light once more the monk who had been hidden for four hundred years.

"Among the other paintings examined, was a panel of the 'Madonna' by Geertgen van St. Jans (about 1500 A.D.) which had always excited comment because of the apparently stiff and unnatural position of the arms. The radiograph showed the presence of a child in the arms of the Madonna, which fully explained their attitude. St. Jans is known to have painted his children disproportionately small; and the presump-

tion is that this defect was the cause of some former owner having the Christ-child painted out.

"It will be seen that a great field is opened up for this method of detecting the presence of later additions imposed on the work of the original artists; and many a picture of doubtful origin and date, and subsequent 'improvement,' may prove under the X-rays to conceal something very much more valuable than what appears upon the surface."

A New, Simple Printing-Process

A PROCESS remarkable for its economy, simplicity and its results is that invented and patented by Mr. F. W. Donisthorpe, and now placed on the English market as the "D.I.P." Process, meaning *Dye Impression*. Photographs according to the *Photographic Dealer*. Exposure and development is made in the ordinary manner but on "D.I.P." negative paper, the only difference being that development is stopped while the light parts are still white. Very thin negatives give excellent results, whereas overdeveloped negatives are most unsuitable. The negative is washed and dried in the usual manner and then hardened in a preparing-bath made up from special chemicals supplied in packages. The next step is to place the negative in a dye-bath that has been made up according to instructions on the package.

Two types of printing-papers are supplied—baryta paper for large prints, gelatine-coated paper for small prints. Printing-paper is thoroughly soaked in a dish of clean, cold water and placed face downwards in contact with the negative which has been removed from the dye-bath and placed face upwards on a piece of glass or equally smooth surface. A short squeegee is usually sufficient, and then the finished print is stripped from the negative and dried rapidly. Further, prints may be made from the same negative by a brief immersion of the negative in the dye-bath before each successive print is made. A negative can be dried and stored for future use, and the dyes can be poured back in the bottle and used repeatedly.

Dyes of various colors are supplied, so that a wonderful variety in printing-effects can be obtained, and the process is altogether very fascinating. This brief description should be sufficient to show the dealer that there is good scope for these materials, and, as the prices are extremely moderate, there should be little trouble in creating a brisk demand.

A Course in Motion-Picture Photography

IN reply to numerous inquiries regarding a course in motion-picture photography at a competent school of instruction, and also one conducted by correspondence, we take pleasure in recommending a complete course in *book-form*. We refer to the voluminous and comprehensive work, in one large and fully illustrated volume, prepared and issued by the New York Institute of Photography. It is reviewed elsewhere in this issue of PHOTO-ERA. The price of this highly instructive and profitable book, which enables the enterprising student to learn practical motion-picture work at home, is only \$6, and will be sent, post-paid, to any address in the United States, by the publisher of PHOTO-ERA MAGAZINE.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

LACK of unity is the trouble with this picture. The Dr. was simply overwhelmed with an abundance of pictorial material, and tried to get it all on the film. Cut off two inches from the right, and you will have two perfectly good pictures, viz.: A beautiful path and a beautiful sheet of water. The composition of the path is almost ideal. The lines of entrance and exit are fine, and there is a maximum of concentrated interest. The river-picture would not be quite so attractive. As the print stands, there is no predominating interest: the path, the men and boat, the water and the trees are all clamoring for principality, and the eye is confused. Figures in landscapes should be very prominent or the reverse, otherwise they detract from rather than add to the picture. J. E. CARSON.

WHAT is it that holds one's attention most when viewing this print? If it is the cool, shaded walk through a vista of arching trees, then something is lacking to hold the eye when it reaches the distant end of the path. If, on the other hand, the central point of interest is supposed to be the figures, partly concealed by an adjacent bank, then the reflection cast by an overhanging tree competes with them to their detriment. Indeed, in the whole print there is a very distracting lack of balance that is confusing, to say the least. It would be a great improvement to block off most of the print on the left up to and a little beyond the river's bank, leaving just the path and hole of the large tree on the left of the reconstructed print. If another negative of this place could be made, the introduction of two figures coming up the road just at the farthest bend would tend to hold one's interest when the eye came to the path's end.

H. H. WOODCOCK.



THE PICTURE CRITICIZED THIS MONTH

HERE we have the common error of two pictures in one. The path on the right makes a fair woodland scene if the distressing lights through the distant trees were subdued. But as the boat with occupants was probably meant to be the center of interest, we should have it so. Therefore trim off a generous inch from the left, about three-quarters from the top, and the path. This leaves the boat in lower right quarter of the resultant picture, where it should be, I believe. There also seems to be a peculiar quality of diffusion which may be from incorrect focus or possible overexposure which has glared up the water. There is good detail in the shadows, but detail in the water is more important. Then there are too many occupants in the boat, so that there is a scattered effect. Also the branch of the tree cutting through the boat should have been avoided.

C. MANLEY DeBEVOISE.

THE subject does not lend itself to well-balanced arrangement. The divergent lines of path at right, as well as conflicting and heavy lines of the limbs is the chief cause of failure. The shadows of the foliage, taking the space they do, render the picture top-heavy—more noticed on account of poorly shown water, the tone of which is unnaturally white. Reflections in water, at bottom, are unintelligible. I fear that no trimming will materially improve the print.

LYNDSEY BOURKE.

THIS picture contains two separate and distinct themes which can easily be made into two lovely pictures. By a vertical division bisecting the large tree nearly two-thirds to the right, we have a picture of a delightful path through the woods. There is good depth. The eye is led into the picture along the path and out into the distant sunlight. The highlights and shadows on the path are good and it has an alluring softness.

By cutting off a little more than a third from the top of the remaining picture, we have a lovely horizontal panel. The composition is much better. The

boat and its occupants (the point of interest) is no longer in the center. The reflections of the boat and trees on the water break the whiteness and give a most fascinating little picture. The picture, on the whole, is soft and pleasing and is apparently of good photographic quality.

MARGUERITE HUSSEY.

THIS is easy. I merely quote a part of last month's winning criticism, with little alterations to suit the new picture. "This poor print has no center of interest, no thought of composition, no attempt to tell a real story (no, it tries to tell two). What are the people doing? The blurred, confusing mass of highlights and shadows makes it hard to detect the canoe and its occupants. A more suitable, less spotty background should have been produced. The print also appears to be out of focus (it certainly is not artistic diffusion). The half canoe is in anything but a pictorial position." Why was it not floating downstream? Why the grotesque branches? Is the canoe on water, ice or a sheet of glass? Why the roadway? Why the underexposure? Why was the picture made? Thanks, Mr. Davis, you've helped me wonderfully.

R. A. BARFORD.

I WILL make a Yankee-guess that a contact-print from the original negative would give a very pleasing picture showing the beauty of the tree with its branches and leaves with their delicate shadings, and that the water would *look wet*, and not like dry, white paper. I think that the enlarging and halftoning have eliminated much of the beauty and charm of the evening-scene, and left a smudge rather than a picture. If the boat is to be in the picture, it should look at least like a boat and not merely a black streak. The three people are intruders. The path along the shore, being close to the water and really a part of the shore, does not seem to me as particularly objectionable, especially if the nearer end of the path were darkened a little so that the path would not be quite so insistent.

WILLIAM H. BLACAR.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE beholder who would decide for himself the significance of the episode explicated by Edward Weston in his capricious design, "Epilogue," needs the gift of a fertile imagination. It is, perhaps, idle to speculate as to artist's intent, which may have been none other than to create something strikingly unconventional, based upon a plausible theory of design. There seems to be a logical connection between the well-placed aesthetic figure, which monopolizes the center of interest, and the decorative vases—but let those that study this arrangement on the front cover and repeated as the frontispiece—amid the cooling breezes of the seashore or the mountains, form their own conclusion. The reviewer, confined to his sun-baked office, is content to relinquish this pleasure to others.

The picture-maker will find much to repay his study of the three pictures that accompany George W. French's essay on landscapes with figures. There is no more intense camera-enthusiast than the writer of this important and timely article; and the information he imparts to less experienced workers cannot fail to prove helpfully and practically welcome. Data: "Up from the Misty Lowlands," page 57; made in Fryeburg, Maine, August, 3.30 P.M.; hazy; Ensign Camera ($3\frac{1}{4} \times 4\frac{1}{4}$); $6\frac{1}{2}$ -inch Velostigmat, series III; at F/4.5; Standard Orthonon; pyro; 2-time color-screen; 1/5 second; enlarged on Artura.

"How dear to my heart," page 59; made in Maine; 5 x 7 Seneca view-camera; 3-time ray-filter; lens stopped to F/6.3; 1/50 second; enlarged on Artura Carbon Black, Grade D.

"The Sunlit Valley," page 60; made in Maine; 10 A.M.; 3A Kodak; B. & L. R. R. lens; stop, U. S. 16; ray-filter; 1/25 second; print, Azo H.

The author of the unusually successful group of pond-lilies, page 61, is a man highly sensitive to the beauty of nature. Mr. Botel shrinks even from referring to the mechanical means that enable him to obtain the rarely beautiful results that are the delight of his friends. PHOTO-ERA readers will doubtless recall his exquisite "Spirit of Spring," that gained him the second prize in that competition, which was published in the issue of September, 1918. Mr. Botel yielded to the urgent request of a dear friend to enter that uncommonly refined interpretation of the vernal season. This rare, artistic quality also characterizes his "Water-Lilies." It is not often that these flowers in their setting of lobe-shaped leaves are rendered so truthfully and with such convincing relief and perspective as in Mr. Botel's composition. The arrangement of the five flowers is particularly happy, and the execution is without a flaw. Data: July 10 A.M.; 4 x 5 R. B. Cycle Graphic; 14-inch Protar; stop, f.22; 1 second; W. & W. Panchromatic plate; pyro; 8 x 10 enlarged negative with Verito lens; tone, Italian Green Carbon.

As a lover of children, George W. French appears to excellent advantage in his delightful genre on page 63. It is also a very successful performance as a sunlight-picture. The source of light is directly overhead—contrary to the advice of the best instructors; yet the faces and figures of the children are admirably lighted—no objectionable contrast visible anywhere. Singularly enough, this picture will serve as an ad-

mirable illustration of the next competition—"Outdoor Genres," the story of which, by Mr. Beardsley, appears in its proper place in this issue.

As I have pointed out on several occasions, no park-system in this country offers so many pictures of rare beauty and bewildering variety as the Metropolitan Park System of the City of Boston. The Fenway and the Riverway, in particular, offer the choicest views. The latter is crossed by several stone-bridges, enhanced by beautiful trees, bushes and reeds. One of these serves as the motive of James Cooper's charming view, page 65. With rare artistic judgment, Mr. Cooper has introduced a mass of tall grasses to form his foreground, which, merging in the nearby foliage, produces a semicircular line of beauty that would unfold the bridge in a soft embrace. It is a grateful subject, and one which would look equally well if the light fell more obliquely (later in the afternoon) thus changing the illumination of the various masses and giving the theme a different interpretation. Data: Foot-bridge at Longwood, Mass.; September 2, 2 P.M.; clear sunlight; Anastigmat lens; 5 x 7 Orthonon; 1/25 second; 11 x 14 bromide enlargement.

One of the happiest surprises that has come to me, this year—and I must confess to many—is the charming letter, accompanied by seven prints of captivating beauty and artistry, from Enoch M. Barker. The whole affair was absolutely spontaneous and, had it occurred earlier in the season, I might have arranged to publish the entire series of Mr. Barker's pictorial masterpieces. Two and one-half pages was the maximum amount of space I could allow, and, instead of reproducing two pictures on the third page, I decided in favor of one large one. In making this confession—not to be outdone by my friend, the contributor—I realize that I expose myself to the criticism of my readers. They doubtless will wish that I had given them two, instead of one, of Mr. Barker's pictures. The exquisite quality of Mr. Barker's prints I cannot praise too highly. If the fates are kind, it will be suggested in the halftone-reproductions. More, I cannot promise. True poetic feeling, comprehension of artistic principles and power of pictorial expression are the outstanding features of Mr. Barker's work. They are revealed convincingly in his two pictures. Data: Evening, West River; July, 6.30 P.M.; taken after a storm, heavy clouds breaking away; Bausch and Lomb Rectilinear 4 x 5; stop, 32; Stanley 50; 1/25 second. Gwynns Falls Park; October, 4 P.M.; dull light; heavy mist in distance; Ansco $2\frac{1}{4} \times 3\frac{1}{4}$ Folding Camera; enlarged to 5 x 7; Dagor, F/6.3; used at F/11; Eastman Speed-Film; $1\frac{1}{2}$ seconds.

The two attractive genres by A. H. Wood, page 68,—for they are scarcely portraits in the strictest sense—afford profitable examination by those camerists that have tried unsuccessfully to produce satisfactory portraits—or genres—in full sunlight. His manner of procedure and the data will be found in the text.

The views of an old English country-home, that illustrate an instructive article by the authors of our monthly London letter, pages 71 to 76, are not to be compared with the portraits and genres in a high key made famous by Will Cadby. They are the combined work of the Cadbys; although it would be idle to expect any

architectural photographs from this source suggesting, in the least degree, the light-toned style of Will Cadby. The only available data are contained in the article.

Having had an excellent opportunity to converse with Warren G. Harding—the Republican Party's choice for President—and to study his fine and expressive face, I may say that the portrait produced by the Moffett Studio is a characteristically truthful one and, compared with photographs from other studios, is unsurpassed for veracity and technical excellence. The lighting has been skilfully managed, and the low key retains the modeling with the fine traits that stamp Mr. Harding as a man of rare strength and nobility of character. A paragraph from his memorable address, delivered at the Home Market Club Dinner, in Boston, May 14, last, may serve to indicate the candidate's traits as an exemplary American and statesman.

"My best judgment of America's needs is to steady down, to get squarely on our feet, to make sure of the right path. Let's get out of the fevered delirium of war, with the hallucination that all the money in the world is to be made in the madness of war and the wildness of its aftermath. Let us stop to consider that tranquillity at home is more precious than peace abroad, and that both our good fortune and our eminence are dependent on the normal forward stride of all the American people. Nothing is so imperative to-day as efficient production and efficient transportation, to adjust the balances in our own transactions and to hold our high place in the activities of the world. The relation of real values is little altered by the varying coins of exchange, and that American is blind to actualities who thinks that we can add to cost of production without impairing our hold in world-markets. Our part is more than to hold. We must add to what we have. It is utter folly to talk about reduced cost of living without restored and increased efficiency of production on the one hand and more prudent consumption on the other."

Data: Moffett Studio, 57 East Congress Street, Chicago, Ill.; May, 1920; 12 M.; good light; 2 seconds; Eastman Portrait Film. The artist was E. L. Boves.

At the risk of wearying my readers with repeated praise of Mr. Sheahan's now celebrated salon-picture (published originally in "Pictorial Photography in America" and, later, as a cover-decoration, in color, of PHOTO-ERA MAGAZINE for April) I invite my friends to enjoy it in the current issue. This affords a much-coveted opportunity for many subscribers to retain the reproduction of this beautiful California landscape in binding the magazine, when the covers are usually rejected. Data: View near Los Angeles; June, 3.30 P.M.; 5 x 7 Empire State camera; 12-inch spectacle-lens; stop, F/5.6; K3 color-screen; 1.15 seconds; Hammer's Ortho-chromatic; pyro-metol diluted with double amount of water; print, Azo AA, enlarged by daylight; exposure, 5 minutes; dev. with Monomet.

Advanced Workers' Competition

As was expected, the May competition appealed successfully to a large number of workers, yielding an uncommon variety of subjects. Naturally, the jury spent considerable time before it was able to select the best three pictures and, finally, to determine the order of the prize-winners. The result of the judges' efforts cannot fail to meet the approval of our subscribers who have a right to expect pictures that shall prove sources of artistic enjoyment and profitable study.

Judging from what Dr. Pardoe had to offer in the

July number, our readers will not be surprised to find him the author of as artistic and delightful a pictorial subject as has ever graced a page in this magazine. The picture speaks for itself. It will bear the scrutiny of the severest critic, and win general and unstinted admiration. And when all is said and done, it may be stated that, throughout, "Fair Autumn" is the product of straight photography—no retouching of the figure or the enviable pumpkin. The touches of light are absolutely spontaneous and immaculate. Data: November, 1919; 10 A.M.; bright light; 5 x 7 Graflex; 16-inch Ross lens; stop, 5; 1/25 second; Eastman Portrait-Film; pyro; enlarged on P. M. C. Bromide No. 8.

In the "Highway," Kenneth D. Smith struck a note of pleasing originality. Ordinarily, a long, white fence is a menace to an harmonious composition—it is a thing to be avoided. Not so, here. It takes its proper place in the State-road, which is crossed by innumerable attenuated shadows, yielding character and interest. The tendency of lines and masses is to converge towards a point far beyond the confines of the picture. How well the team is placed, and how admirably it plays its part in this strikingly artistic performance! Data: New Hampshire; April 1, 1920; 3.30 P.M.; R. B. Auto Graflex (3 1/4 x 4 1/4), with 7-inch Verito lens at F/8; Cramer Inst. Iso Double-Coated plate; pyro, in tank; part of negative enlarged on Artura Carbon Black Rough Mat.

Yes; we observe in the "Lone Trail" an old friend. Footprints in the snow have served the purpose of many a camerist; but it may be asserted, with some degree of truth, that Mr. Chant's is "a little different from the rest." But what shall we say of the tree, which some of our critical friends would wish eliminated? Imagine it suppressed, and you would want it restored! It serves to emphasize the culminating point of the diagonally moving footprints. Data: February, 10 A.M.; bright sun; Ica Trona camera (3 1/4 x 4 1/4); 4 1/2-inch Hecla lens, at F/18; 2K color-screen; 1/5 second; Premo Film-Pack; pyro, in tank; enlarged on P. M. C. Bromide No. 7.

Beginners' Competition

THE subjects for the approaching outdoor-genes competition include just such a pleasing one as secured the first prize in the Beginners' "Miscellaneous" class, page 91. Despite the numerous and glaring faults, the picture by Chas. T. Graves expresses the humane trait—love of animals. It would be better, had the camera been placed less close to the group. Like so many hastily executed snapshots, this one shows evidences of careless preparation, or none at all. The boy's dark costume contrasts violently with his little visitor's snowy garb. In planning this picture, the camerist should have chosen differently dressed models, avoiding strikingly opposed effects. The background is also objectionable, on account of a white house at each end of the picture. The two broad, deep shadows might also have been avoided, had another and more favorable spot been chosen. But with increasing knowledge and experience, our young artist will be able to avoid the errors that mark his present attempt. Data: March, 4 P.M.; bright sun; Ansco Vest-Pocket No. 3 (2 1/4 x 3 1/4); 3 1/2-inch Ansco F/6.3; stop, F/8; 1/25 second; Eastman Autographic Film No. 120; pyro-soda; enlarged on Artura Carbon Black Extra Heavy.

The picture of a pump in mid-winter, page 92, is admirable technically except, perhaps, for the intense

(Continued on page 102)



ON THE GROUNDGLASS

WILFRED A. FRENCH



Helpful and Constructive Criticism

THE wealthy young contractor, George Pendleton, had become the proud possessor of a $6\frac{1}{2} \times 8\frac{1}{2}$ mahogany folding-view camera fitted with an expensive anastigmat lens set in an Ilex shutter. As he was passing the Metropolitan Building, with its magnificent, lofty tower—all bathed in bright sunlight—he was fascinated and began to set up his camera on its mahogany tripod. He had just racked out the lens, when a passing stranger, interested in the proceedings, remarked: "Pardon me, Sir; but I am surprised that you should select a viewpoint directly opposite the center of this magnificent building! Might I suggest a point further to the right? Let me show you."

The two walked together about one hundred feet southward and the fellow-camerist pointed out a view in perspective which showed the southerly side of the tower, in shadow. Thanking the stranger for his helpful suggestion, Mr. Pendleton returned to his camera, and, putting his head under the focusing-cloth, proceeded to focus the image. In doing so, he was amazed at the flood of light the radiant object reflected, when a familiar voice, which he recognized as that of a fellow-member of the camera club he had recently joined, gave expression to the remark: "Rather an elaborate pinhole-camera you've got there, Mr. Pendleton, but you shouldn't use such an enormous aperture. One about $1/40$ of an inch would look better."

Somewhat bewildered by this remark, Mr. Pendleton emerged from behind the focusing-cloth to see what could be the matter with his lens, when he found that it was gone!

It did not take these two camerists long to decide that the theft had been committed by a confederate of the stranger, who so courteously and intelligently had pointed out the really superior viewpoint. Mr. Pendleton, although a man of kindly nature, informs me that he will leave no stone unturned, and will spare no expense, to ferret out this dexterous pair of swindlers, and to recover his lens and shutter, which he is confident of identifying. Let us wish him success!

A Common Cause of Complaint

MANY were the opportunities offered the camerists to get interesting snapshots on the Fourth of July. It happened that, witnessing some of the events, I noticed several camerists walking about in search of material—with their folding cameras extended, shutter set, and ready for instantaneuous action. Two of them happened to be acquaintances, and, observing just what was going to happen as the result of their carelessness—amid conditions of bright sunlight—I asked them to let me know if any of their results should prove in any way defective.

A few days afterwards, I received calls from these amateurs, whose cause of complaint consisted of well-defined areas of fog on the negatives, which, in these instances, were both plates and cut films (film-packs). These ardent workers were unconscious of the fact that, while the shutter was set and slide drawn, solar rays gradually found their way through the closed

opening of the shutter and, reaching the plate, left their impress in the form of foggy markings. At first, these careless workers were mystified by these patches of fog on their negatives; but, the moment I explained how it all happened, they were greatly astonished. Of course, they at once understood the nature of the difficulty, and were about to promise never to do so again, when I told them how they could continue the practice with impunity. I explained that I had done the same thing, many times during my photographing in Europe, with my folding-camera extended, shutter set and slide drawn, thus walking about sometimes thirty-five or forty-five minutes before I made the exposure. I merely took the precaution to have a close-fitting cap, attached by means of a cord to the camera, placed over the lens all the time that I was walking about in search of a subject. Just before releasing the shutter, I slipped off the cap and replaced it over the lens until ready for the next exposure. Simple, isn't it?

Substitute for a Rubber-Band

THE good old maxim, "Necessity is the mother of invention," has been the origin of many practical and useful devices. For instance, I have a map that when rolled up is more easily carried about. A wide rubber-band usually holds it together; but when I wanted to use it, recently, a thin thread was wound around it. Being where paste, string, rubber-bands and wrapping-paper were not available, I took a small piece of tough paper that I happened to have with me, and with my pocket-knife—I had no scissors—quickly and easily made a paper-band for the rolled-up map. I cut a strip about three and a half inches long, folded it once, and cut through both folds, so as to have five strips of equal width (about one-quarter of an inch) with margins of about half an inch at both ends. Unfolding the paper, I weaved the tightly rolled-up map half-way through the slits, alternately, let go, and behold: the roll was tightly clasped within the two-and-three-fold paper-band, which, used carefully, will last as long as an elastic band.

"Don'ts" for Everybody

Don't forget your old enemy, *Dust*, when filling your plateholders for an outdoor job. Every speck can be removed or rendered harmless with a rag moistened with glycerine. This is rubbed over the inside of the plateholder.

Don't fix plates in a flat dish, unless you can constantly rock the dish. Always use an upright, groove tank.

Don't imagine that because you only opened the door of that darkroom for a second, the paper you were using is not likely to be fogged—it takes a very little white light to spoil Bromide paper.

Don't expect the electric lamp in your printing-box to always give the same light. It gets less with age, and often the current is weaker at dusk when the stores, restaurants and theaters are lighting up.



ANSWERS TO QUERIES



P. O. S.—Developing-stains on prints may be avoided by giving them a brief washing or rinsing, and then placing them, face down, in the fixing-bath, which should be kept in motion for a short time. If possible, the prints should be kept under the surface of the fixing-solution. Of course, if any of the developing-solution remains on the prints—not being washed out—it is likely that stains will appear later on.

D. A. W.—Warm a developer in hot weather?—never! We understand that you desire to warm your developer, in order to accelerate its action, when used in connection with underexposed plates. The desirability of this procedure is questionable, inasmuch as other methods can be adopted to get the most out of underexposed plates. Ordinarily, a strong, quick-acting developer used for this purpose, in warm weather, is the best thing; and, as it is well known that solutions used at a higher temperature are likely to cause frilling, it is wise to keep the developing-tank surrounded by cracked ice. To warm a developer is a dangerous proceeding, as it is not only likely to cause frilling, but to fog, as well. Unless there is urgent need for immediate prints—as is often the case in press-photography—it would be well for you to follow the usual method of developing, aided by cooling-devices—as suggested—and thus get the most in the quickest possible way. This applies to developing in hot weather.

J. S. A.—Autochrome window-transparencies are easy to make. Expose your Paget or Autochrome Color-plate according to the length of time given in a standard exposure-meter; develop it according to the directions given by the makers; then place it in a metal transparency-frame (protecting it with a piece of clear glass) and hang it securely in a north window. We have had several in our two north windows for a number of years, and no fading of the colors yet.

B. P. S.—Ray-filters are of great value in landscape-photography and in many forms of camera-work. For ordinary snapshot-photography a three-time ray-filter will serve you better than one that requires more exposure. As you say that most of your pictures are out-of-doors subjects and that you wish to be able to include clouds, we are sure that a three-time ray-filter will do nicely. Your local dealer should be able to supply the correct filter for your Kodak.

O. P. A.—A high-speed anastigmat is not needed for vacation-photography. The F/7.7, F/6.3, and F/6.8 anastigmats are well adapted to all the requirements of the vacationist or tourist. Of course, lenses of these speeds are made by several manufacturers at different prices; but it is safe to say that the camerist can make no mistake to purchase any lens—no matter how moderate in price—from any lens-manufacturer that advertises in PHOTO-ERA. Before coming to any decision it would be well to send for the latest descriptive matter; and, after a careful reading of all the information presented, to consult your local dealer or some amateur or professional photographer who is qualified to give intelligent and sound technical advice.

H. L. S.—The use of extra-fast dryplates is not to be recommended for general photography. Plates of *average speed* are better for the amateur camerist who is not sure of his exposure and hence needs a plate that has considerable latitude in exposure and in developing. Of course, there are times when a fast plate is necessary in order to obtain any pictures at all. This is especially true on cloudy days or later in the day. Also, in making high-speed pictures of auto-races, airplanes and ball-games, an extra-rapid plate is of great assistance. Before you go on your trip, it would be well for you to consult your dealer and have him explain at length the relative speed-values of standard plates now on the market.

B. M. J.—The position of the sun is an important part of pictorial composition. Most instruction-books advise the photographer to have the sun at his back. Practical experience seems to prove that in most cases this advice is sound; but there are many pictorial masterpieces that adorn many a home or exhibition that were made against the sun or with the sun at the right or left of the worker. It is well for the beginner to stick to the general rules until he has mastered his camera; but there is no reason why he should not attempt to make pictures with the sun in any position that he thinks will help to make the picture more beautiful or striking. A little experimental work along this line will soon show the camerist what he can or can not do.

A. D. S.—To make photographic prints in one color (monochrome), it is not necessary to use imported compressed tablets, which are now very expensive, as you state. Most workers prefer the many fascinating processes of converting black and white prints into red, green, sepia, blue or any other desirable color. For this, we recommend heartily a little work, "How To Make Prints In Colors," which is No. 4 of a series of books entitled "Practical Photography." It contains all the known methods of making photographic prints in colors, and will be sent to any address on receipt of 54 cents, postpaid.

A. S. B.—"P. O. P." is the English form of designating printing-out papers. PHOTO-ERA avoids the use of this term, except that in quoting English sources it may retain the abbreviated spelling. We think that the use of the designation "P. O. P." is sometimes confusing—for example, in one case that we recall, it was mistaken for "D. O. P." (developing-out papers); and, similarly, the letters "D. O. P." have sometimes been mistaken for "P. O. P.," on the assumption that the former was a misspelling of the latter.

W. J., Jr.—To exclude dampness from a dark-room, at the seashore, we recommend that the window of the room be sealed up tight by means of gummed tape to exclude the damp air. It is best, however, that all sensitized material be kept in a large tin container. In one of the upper corners, at the top, place a small glass containing a quantity of Calcium Chloride to absorb any moisture that may enter. Then close the container and seal it with gummed tape. This is the best precaution to keep away moisture such as you are troubled with.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



The P. A. of A. and the Woman's Auxiliary

At the meeting of the Board of Directors of the P. A. of A., at Toledo, Ohio, changes were made in the regulations for the Woman's Auxiliary as follows: No dues are to be collected, each woman who attends the National Convention may become a member of the Auxiliary by signifying her desire to do so, and by the payment for the button which admits her to the Convention-Hall.

The disposal of the dues which have already been collected will be decided at the Milwaukee Convention. As a fund for the care of the rest-rooms and for the entertainment of ladies who attend the Convention will be provided by the P. A. of A. and the Manufacturers and Dealers, the Board decided that there is no need of the payment of dues into the treasury of the Auxiliary.

ALICE W. CHAMBERS,
Secretary.

International Photo Exhibition by Toronto Camera-Club

THE Toronto Camera-Club announces its International Exhibition of Photography at the Canadian National Exhibition, to be held at Toronto, from August 28 to September 11, 1920. Those who have been taking part in these exhibitions in the past, are familiar with the high artistic standard that has been maintained, and also with the commendable way in which all entries are treated. American pictorialists are invited to contribute. Those interested may obtain entry-forms, giving particulars, from Mr. L. J. Geddes, Secretary of the Exhibition-Committee, 2 Gould Street, Toronto, Canada. The exhibition will be held in two rooms of the Applied Arts Building; and the committee hopes to hang between three and four hundred prints.

In view of the uncertainty regarding transportation-facilities, exhibitors are requested not to delay their departure until the last moment.

Dyes for Photographic Plates

At the last meeting of the American Astronomical Society, Miss Florence J. Stocker reported on the progress made by American chemists in producing dyes for use in sensitizing photographic plates to various portions of the spectrum. The dyes used in sensitizing to the green, red and infra-red are of the types known, respectively, as pinaverdol, pinacyanol, and dicyanin. The U. S. Bureau of Chemistry has produced a pinaverdol which is somewhat superior to any German or English green sensitizer, and a pinacyanol which is practically the same as German pinacyanol and English sensitinol red. The same bureau has produced several dicyanin dyes which are only slightly inferior to those of German make. Recently the Bureau of Chemistry has submitted to the Bureau of Standards, for testing, a new type of dye, called kryptocyanin, a sample of which has been found to give a very pronounced narrow region of photo-sensitivity from 7200A. to 7700A. This may prove of great value to spectrum photography.—*Scientific American.*

A Medal for Photo-Era

WHEN in 1914 the call came to aid the people of Belgium, soon after the beginning of the European War, PHOTO-ERA readily responded, doing its share in a quiet, effective way, accepting as its reward the pleasure in being able to minister, even in a small degree, to the sufferings of the oppressed.

To the Publisher's great amazement and pleasure, the Commission for Relief in Belgium sent him, June 14, last, the following letter:

"MR. WILFRED A. FRENCH, Boston, Mass.

"Dear Mr. French.—I take pleasure in sending you, herewith, a copy of a medal cast in Belgium as an expression of the appreciation of the Belgian people for the work of The Commission for Relief in Belgium, and those whose generous and continuing support enabled it to be carried through to a successful conclusion.

"In transmitting this medal to you, permit us to express our appreciation of the coöperation we received from PHOTO-ERA in connection with the work of the New England Belgian Relief Fund.

Yours faithfully,

THE COMMISSION FOR RELIEF IN BELGIUM.

JAMES A. HEALY, *Secretary.*"

Accompanying the letter was a beautiful silver medal, two and one-half inches in diameter and of highly artistic workmanship, bearing on the obverse side, in profile, portraits of King Albert and Queen Elisabeth of Belgium. On the reverse side is represented a female figure (America) offering a sheaf of wheat to a young Belgian, at whose side kneels his wife with a baby in her arms. Surrounding the picture are the words: "GÉNÉROSITÉ—AMÉRIQUE: BELGIQUE—GRATITUDE."

Our Foreign Exchanges

WE welcome again to our desk the following photographic journals, whose publication, during the war, was either suspended or interrupted: *Bulletin de l'Association Belge de Photographie*; *Bulletin de la Société Française de Photographie*; *Photographische Rundschau*; *Wiener Mitteilungen Photographischen Inhalts*; *Photographische Korrespondenz*. These journals all contain interesting news, and are highly meritorious for purposes of reference and comparison.

G. Horlin's Success in Sweden

MANY photographic workers in this country—especially in Chicago, where Mr. Horlin was engaged in business for a number of years—remember him and his artistic camera-work with much pleasure. During his long sojourn in America, Mr. Horlin produced many admirable pictorial results, a number of which have graced the pages of PHOTO-ERA.

Since his return to his native city of Stockholm, a number of years ago, Mr. Horlin has been actively devoted to his hobby, producing several series of

views typical of Sweden. Many of these pictures, owing to their superior merit, were purchased by the *National Geographic Magazine*, of Washington, D.C.

In a private letter to the Editor, Mr. Horlin states that some of his landscape-work appealed so heartily to a prominent Swedish railway-official, that the latter presented him with a pass that enables him to travel wherever and whenever he pleases on the Government railways—a privilege which, in these days of enforced economy, represents quite a feat!

Mr. Horlin contemplates a trip to the northern part of Sweden, for the purpose of photographing the big rivers and waterfalls of that section. It may be that, at some time in the not far-distant future, we may favor our readers with some of his photographs of these unfamiliar subjects.

Photographic-Patents

THE following patents are reported exclusively for "Photo-Era" from the Patent-Law Offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending twenty-five cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of April, the last issues of which have been disclosed to the public.

Patent No. 1,341,665 has been issued to Harvey N. Ott and Frank H. Bufton of Buffalo, N.Y., for Projection-Apparatus, assigned to Spencer Lens Company of Buffalo, N.Y.

Projection-Apparatus, patent No. 1,341,666, has been issued to Harvey N. Ott and Frank H. Bufton of Buffalo, N.Y., assignors to Spencer Lens Company of Buffalo, N.Y.

Harvey N. Ott and Frank H. Bufton of Buffalo have been granted patent No. 1,341,667 for Attachment-Means for Projecting-Objectives, assigned to Spencer Lens Company of Buffalo, N.Y.

Patent No. 1,341,718. Camera. Charles M. March of Portland, Me., and Charles L. Tidd of Gardner, Mass.

Photographic Shutter, patent No. 1,341,823, to William A. Riddell and Frederick A. G. Pirwitz of Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y.

Malcolm Body Boyce of Haverhill, Mass. has been granted patent No. 1,342,155 on Autographic Attachment for Cameras.

Patent No. 1,342,590 has been granted to Frank W. Lovejoy, of Rochester, N.Y., assignor to Eastman Kodak Company of Rochester, N.Y., for Photographic Film.

Camera. Patent No. 1,344,182. To Arthur J. Miller of Warren, Pa.

Leonard Miles of Coventry, England, has been granted patent No. 1,344,267 for Feeding and Measuring-Device for Rolls of Sensitized Strips employed in Photographic Cameras.

Patent No. 1,343,590. Film-Pack. To Lloyd E. Snyder of Rochester, N.Y., assignor to Eastman Kodak Company, a corporation of the State of New York.

Plate-Holder for Photographic Cameras has been patented by Joseph Goddard of Rochester, N.Y., assignor to Seneca Camera Mfg. Co. of Rochester, N.Y., a corporation of the State of New York.

Yoshimori Yamada of San Francisco, Calif., has been granted patent No. 1,343,653 for Photographic Plate-Holder.

Patent No. 1,343,613. Retouching-Screen. To Iwer Boysen of New York.

Exhibits Going Abroad

SOME of the readers of PHOTO-ERA will be sending photographs to exhibitions abroad during August. It may be of interest to them to know that the Post-Office authorities have classified photographs as printed matter. If a package of prints is presented at a post-office, and nothing is said by the sender, it will be weighed and stamps given to affix. If it does not exceed 18 x 18 inches, it will go to its destination; but if the dimensions are afterward found to be more, it will be returned to the sender, with stamps canceled and wasted.

If it is stated that the package is to go by parcel-post, however, its size may be seventy-two inches; that is, the greatest dimension is measured flat across; then the tape is drawn around both sides; and all together may include up to seventy-two inches. A declaration-tag is made out, and no difficulty will be experienced, thereafter. But it is well to note the limit of size, and the necessity for making it clear that the prints go by parcel-post, and not as printed matter, when so desired.

Oratory in the MacDonald Family

MISS JESSIE MACDONALD, daughter of Pirie MacDonald, the famous Photographer of Men, New York City, will deliver her talk, entitled "Injecting Personality into your Letters," before the approaching International Convention of the P. A. of A. If Miss MacDonald has inherited her father's brilliant accomplishment of oratory, her hearers will indeed be favored by an impressive and illuminating address.

Standard Books at Old Prices

READERS interested in standard books on photography will please take notice that after August 1 the price of the well-known and popular work, *Photography and Fine Art*, by Henry Turner Bailey, will be \$2.50, instead of \$1.50, as hitherto. PHOTO-ERA has on hand, however, a few copies, which will be sold to its readers at the old price of \$1.50, until the supply is exhausted; after which the price will be \$2.50. First come, first served!

Pursuing this policy, PHOTO-ERA will sell other standard photo-books at the old price, until the present stock is exhausted:

Pictorial Photography in America, 1920, \$2.50, post-paid in the United States; advance-price, \$3.50.

Wall's Dictionary of Photography, \$2.50, post-paid; regular price, \$2.50 plus postage.

Topsy and Turvy, by Carine and Will Cadby, \$1.50, post-paid; regular price, \$1.60 plus postage.

Practical Kinematography, by Talbot, \$1.35, post-paid; advance-price, \$1.50 plus postage.

Professional Photography, by Hewitt (two volumes), \$1.25 post-paid, for the two; advance-price, \$1.75.

Photograms of the Year 1919 (current issue), \$2.00 post-paid; regular price, \$2.00, postage extra.

Lens-Work for Amateurs, by Henry Oxford, with 231 illustrations, \$1.35 post-paid; advance-price, \$1.50 plus postage.

Retouching and Improving Negatives—Photo Miniature (out of print), 35c.; advance-price, 50c.

Behind the Motion-Picture Screen, by Lescarbourea, \$3.50 plus postage, according to zone (weight three pounds); advance-price, \$3.00 plus postage.

It is to be understood that the above-mentioned books are to be sold at the *old price*, as indicated; and enterprising readers will do well to take advantage of this offer.

Our Illustrations

(Continued from page 97)

black of the snow-covered structure. It is a common error to suppose that, in order to secure the interesting gradations in sunlit snow, dark parts of the picture must be sacrificed and show evidences of underexposure. In the present case, at least double the exposure given would not have been excessive. Some careful workers would not have hesitated to allow one second, and, using a diluted developer, would have obtained more detail, without loss of gradation or sparkle. Furthermore, the main object in Mr. Neal's picture pleads for more space at the left, and, with its immediate surroundings, presents too many confusing (vertical) objects, which, if softened by prolonged exposure, would not be so insistent. Data: February, 1 P.M.; sunny; $2\frac{1}{2} \times 4\frac{1}{4}$ Premo Camera with Planatograph lens; stop, U. S. 16; $\frac{1}{4}$ second with 3-time ray-filter; Speed Film-Pack; tank-development with Eastman developing-powders; bromide enlargement.

As a worthy example of what constitutes a true genre, "The Fortune-Teller," by the late A. E. Churchill, page 88, will be studied carefully by intending participants in the approaching "Outdoor-Genres" competition. It represents a scene in the Ghetto of New York City.

Our Contributing Critics

THE picture kindly contributed to this department has a delightfully human appeal—due partly to the circumstance that the models are the artist's dearest possessions. Needless to say, the picture will be accorded the usually courteous attention. Data: "Daisies," June, 6.30 P.M.; fading light; 5×7 Century Camera; 7-inch Euryplan lens; used at F/4.5; $\frac{1}{2}$ second; Eastman Portrait-Film; Elon-Hydro, in tray; enlarged on P. M. C. Bromide No. 2.

Cheap but Useless

ALTHOUGH it is generally advisable, when purchasing or acquiring photographic equipments, to give brand-new ones the preference, it is not unwise to buy second-hand ones, provided that they are up-to-date, guaranteed to be in perfect order, and come from dealers of recognized integrity and adequate technical knowledge. Doubtless, there are cases, of frequent occurrence, where buyers are deceived by unscrupulous or ignorant dealers; and prospective purchasers are advised to patronize dealers, issuing bargain-lists, who are endorsed by the manufacturer, as in the case with bargain-dealers who advertise in PHOTO-ERA. That there are dealers unworthy of the public's confidence in England, as well as the United States, may be seen from an editorial in the *Amateur Photographer* (London), which is reprinted herewith:

"Within the last few days, several readers have consulted us—too late, unfortunately—for our advice to prevent loss. Three of these had been led to purchase kinematograph-cameras at what seemed to be bargain-prices, only to find that they were *obsolete patterns*, requiring a special size of sensitive film, that is no longer obtainable. Another had bought, for landscape-purposes, some plates of a very particular kind, made for a totally different purpose, and useless for ordinary photography; whereas others had got materials which were not guaranteed, and were not in usable condition. We do not question that bargains are to be picked up by those who know what

they are buying; but the first assumption of anyone who is offered something that seems exceptionally cheap should be that there is a special reason for this cheapness, and that, unless that reason is known, it is best to give the 'bargain' a wide berth. The reputation of our leading makers has been built up by the supply of an article which for many years has been of a consistently high-class character; and in such cases as photography affords, where the quality must at first be taken on trust, and where, if it should be bad, its badness is discovered only when it has been used—possibly under conditions which cannot be repeated—that reliability is a quality worth paying for. It can be assured only by buying the materials with the label of the manufacturer, and from a dealer of repute. Should they then be imperfect—which is quite unlikely—one can count upon the manufacturer doing, in his own interest, all he can to right matters. Whereas, with a 'bargain' line, one has no redress, and can regard the transaction merely as the purchase of experience, often anything but cheaply."

An Honor for the Wollensak Optical Company

WE have received from the Rice Leaders of the World Association, of New York City, a copy of an engraved tribute of honor, awarded by this Association to the Wollensak Optical Company of Rochester, N.Y., makers of lenses and photographic-shutters.

This Association is organized for the purpose of creating greater appreciation for right business-principles and quality-products—to point out firms worthy of respect and confidence. The certificate, which is of a decorative nature and beautifully gotten up, measures $9\frac{1}{2} \times 14$ inches, sets forth the honor, quality, strength and service which are qualifications for membership, and in recognition of which it has issued this "RECORD OF BUSINESS PRINCIPLES" as a tribute to this member's recognized adherence to these high standards. The certificate also permits a member, such as the Wollensak Optical Company, to use the Association Emblem—as an evidence of co-operation in this work and also as a symbol of the spirit of integrity which governs its activities.

We compliment our friends, The Wollensak Optical Company, on the distinguished honor which has been conferred upon them and would add that, from our personal knowledge of this firm's service in the photographic industry, it fully merits this signal distinction.

Notice to Competitors

It is assumed that participants in PHOTO-ERA competitions are glad to co-operate with the Editor, by complying not only with the rules—as set forth in this department—but by supplying the data for each picture, including all the particulars, which are of great interest to our readers. A request, accompanied by a two-cent stamp, will bring to the contributor a number of printed data-blanks. The closing-date of entry is the last day of the month. It is, therefore, useless to start a picture on its possibly long journey to Boston a day or two before, in the hope that it may reach PHOTO-ERA in time. The jury meets and makes its decisions as soon as possible after the closing-date, and belated pictures cannot receive consideration. The work of halftoning pictures cannot be done in a few days, as the pictures must await their turn at the engravers'. It is, therefore, urged that participants do all they can to favor the Editor as well as themselves.



LONDON LETTER

CARINE AND WILL CADBY



THERE is a great fuss being made in London about the destruction of five old city-churches. They are in the very heart of the business-center, on ground that is much needed; for religious purposes they are useless as they naturally have no congregations nor any church-activities. Their fate has not yet been decided and, while it hangs in the balance and frantic letters are being written to the papers, plenty of photographers are busy trying to obtain record-pictures. Considering that all these churches are wedged in among business-buildings as tightly as a spectator at last week's Derby, we do not see how the poor photographers can get anything at all representative or satisfactory.

daily disappearing. The right man for this kind of work is Mr. A. H. Blake, who is a perfect walking encyclopedia of our wonderful old city, besides being a clever photographer.

Speaking about photographic record-work reminds us that our education authorities are bestirring themselves in this as in other directions. Educational films are to be released for the benefit of school-children—a reform we have been promised for more months than we care to add up—and, in certain country-centers, photographic records of classes and methods of teaching are to be collected.

The enclosed print is an example of this educational



Photographic record-work is a great cry, just now, and its importance is being insisted on all around. Last Sunday, we were urged by Hugh Stokes in the *Observer* to form local associations in the different districts of London: "Friends of Old St. Marylebone," or of "Old Westminster" or "Old Kensington," as the case may be. It was to be the duty of the members to portion out the districts and then methodically photograph them, block by block. A register should be kept of these photographs and some historical record prepared of the heroes, scholars, writers, eccentrics, murderers (!) etc. who have lived in the houses. The Marquis de Rochegude has done much the same thing for Paris in a very efficient way, but nothing of the kind has yet been attempted in London. The sooner the better, say we, for interesting old landmarks are

record-work, which we thought might interest our readers. It represents the infant-class of the Platt Village School being taught all about color. Each child has a little frame from which are suspended woolen balls representing the primary colors, and, as we listened to the demonstration, we learned incidentally some fresh facts about the blending of colors.

In the midst of a spell of exceptionally bright weather, the only possible day for our photograph was a dull and cloudy morning, consequently a long exposure was necessary. For this reason the Kent Education Committee will receive a proof of the admirable discipline maintained in the school, as well as a record of the teaching, for these young children were able to keep still for five seconds. We scarcely believed that it would be pos-

(Continued on page 106)



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PICTORIAL COMPOSITION IN PHOTOGRAPHY. By Arthur Hammond. Large octavo. 288 pages; 49 illustrations by the author. \$3.50 net. Boston, U. S. A.: American Photographic Publishing Co., 1920.

There is hardly a subject on which the last book has been written, or will be written. As progress is being continually made in the arts and sciences, critics and investigators will record their observations, and the world will be the richer for their writings. A treatise on the principles of art, for instance, is written by an acknowledged authority; and, however admirable his efforts to enlighten his readers, he is likely to err on the score of clearness or completeness, thus creating an opportunity for an able and resourceful critic to supplement his labors by a work of potential value.

The scholarly works on pictorial composition for the photographer, by A. Horsley Hinton, are likely to remain unsurpassed for beauty of style and the masterly illustrations by the author. The lessons that they present were intended eminently for the advanced worker, already a skilled technician; and in this way they filled a long-felt want. Henry R. Poore, a distinguished teacher of art, is the author of two highly esteemed works intended mainly for instructors and critics. To tell the truth, Mr. Poore did not have in mind the needs of the amateur-photographer, although his chapters on pictorial composition have been read with profit by many a camerist.

Perceiving the inadequacies of the works of Hinton, Poore and other writers—so far as they meet the needs of the amateur-photographer eager to apply his talents to pictorial expression—Arthur Hammond, a professional photographer of proved artistic skill and rare critical judgment, has expressed his own views on the subject of pictorial composition in photography in the form of a volume just published. Ignoring the usual references to the history of photography, the science of optics and mechanical operations, Mr. Hammond devotes himself assiduously to the subject of pictorial analysis, on the assumption that his readers already possess a thorough knowledge of the elementary principles of photographic technique. In terms at once simple, clear and succinct, and in a delightfully pleasing and faultless style, the author prepares the mind of the reader with aesthetic suggestion, and proceeds to explain the underlying principles of a real picture—what to avoid, what to include, the true value of tone, simplicity, balance, line, accent, quality, key. Supported by photographs of his own making—portraits, genres, landscapes, shore-views, marines—he takes the reader through the ways and byways of his personal photographic experiences and explains with charming interest, unerring accuracy and exemplary zeal every step conducive to the attainment of a pleasing, artistic and satisfactory picture. Nothing that the most ambitious worker may need is omitted by the author, whose equipment for the self-imposed task is remarkably complete. His practical familiarity with cameras, lenses, plates and technical methods

enables him to discourse illuminatingly on the choice of material necessary to attain artistically pleasing results. Mr. Hammond is an avowed exponent of soft-focus photography; yet with conspicuous impartiality he mentions the excellences of the various types and makes of diffusing-lenses. He is also a firm believer in straight photography, declaring that the qualities that make a photograph pictorial can be obtained by purely photographic means, without manipulation of the negative or print, and that, if brush and pigments must be used, they had better be applied to a blank canvas than to a photographic print. Not content with pointing the way to pictorial success, the author gives expert advice, to those who may need it, with regard to chemical and printing operations, and to the tasteful mounting and framing of enlarged prints. He maintains that the photographer should so control his medium that the finished result shall tell the character and purpose of the photographer himself.

Modesty and self-repression, rather than egotism and presumption, characterize the mental attitude of the author throughout his engrossing volume. He is quick to recognize the eminently artistic value in the works of photo-pictorialists, such as Hinton, Mortimer, Cadby, Blake, Käsebier, Stieglitz, Porterfield and Libby. Mr. Hammond does not pose as a master-photographer; and, while he naturally presents—for illustrative purposes only—examples of his most successful work, he does not hesitate to use others that he would not acclaim as models of pictorial composition. The book is printed in large, clear type, which facilitates the reader's enjoyment. Despite the prevailing high cost of production, the sales-price of this large volume is only \$3.50.

CONDENSED COURSE IN MOTION-PICTURE PHOTOGRAPHY. Edited by Carl Louis Gregory, F.R.P.S. Large octavo, 382 pages. Fully illustrated with original photographs and diagrams. Cloth, \$6.00. New York, U.S.A.: New York Institute of Photography, 145 West 36th St., 1920.

This is one of the several ambitious works published, of late, on the subject of Kinematography or Motion-Picture Photography, but differs essentially from all the others in that it deals with the technique of this wonderful branch of photo-activity. The volume is intended primarily for students in kinematography who wish to prepare themselves as professional technicians of high efficiency, and to command responsible positions with corresponding salaries. As this book is virtually a complete course in motion-picture work, it begins with chapters on the science of light, as it enters into the character, construction and use of camera-lenses, and the projection upon the screen of the completed film. Step by step, the lessons proceed, dealing with every important detail that is of practical value to the aspiring student. Thus, the scientifically correct exposure and subsequent development of the film, together with all the associated chemical operations, form another chapter, which in itself is a series of practical lessons in a condensed form—but so clearly and completely set forth, that any intelligent student, equipped with the proper apparatus, can master the various tasks in the order in which they are presented in this remarkably adequate book of instruction. If already a practical kinematographer, the reader will progress all the more quickly, until he has nothing more to acquire but the actual experience under exacting or thrilling conditions.



WITH THE TRADE



Harold M. Bennett—American Agent

AMONG the numerous callers at this office, of late, none was more interesting than Mr. Harold M. Bennett, the newly appointed agent for the Ica-Contessa Cameras, and the optical works of Carl Zeiss, Jena, Germany. Mr. Bennett gave an illuminating and, naturally, accurate account of the prevailing photographic conditions in Germany. His powers of observation, coupled with a long and valuable business-experience, enabled him to obtain a correct perspective of the manufacturing and dealers' interests in Germany. He spent considerable time in Dresden and Jena; and his excellent reputation as a business-man, preceding his visit, was perhaps of value to him in making such excellent connections. He wisely chose the products of the leading camera and optical works, which include the entire line of the Carl Zeiss products, comprising camera- and kinematograph-lenses, microscopes, binoculars, spectroscopes and other specialties.

We gather from Mr. Bennett's remarks that importations of Ica-Contessa and Carl Zeiss goods are arriving weekly, and that abundant stock will be carried in New York to fill all orders. He has established ample quarters at 110 East 33d Street, New York City, with a large and efficient office-force; and will be prepared to fill orders immediately for all the specialties of which he has the American agency.

W. M. Snell, Optician

MR. W. M. SNELL, who has had charge of the lens-department of the Robey-French Company, Boston, for the past eight years, has severed his connection with that firm (July 17) and resumed his former activities with Dr. Charles A. French, optician and optometrist, 47 Winter Street, Boston. Mr. Snell has acquired a high reputation as a lens and camera expert, and his advice regarding practical photographic matters has been widely sought and prized. We wish him great success in his present position, where he will continue to be a valuable factor, and do full justice to his abilities.

Increased Prices of German Photo-Goods

It seems that German camera-manufacturers have found it necessary to raise the prices of their products 25%. German dryplate-makers have also raised their prices—in fact, there is not a German manufactured product that has not been increased in price. Among the many German manufacturing-firms that have found it both convenient and profitable to unite their establishments are the well-known camera-makers, The Ica Company, of Dresden, and the Contessa Nettel Works, of Stuttgart. On account of the difficulties engendered by the war, several of the large photo-manufacturing firms have absorbed many of the smaller ones.

A. Clinton Wilmerding Continues in Business

A. C. WILMERDING, for a period of thirty-seven years the chief owner and proprietor of the Obrig Camera Company, until recently at 147 Fulton Street, New York City, reports that, owing to a prohibitive increase of rent at these quarters, and

the fact that the building, to be remodeled, had been leased to a new tenant, he had no alternative but to wind up the business and close its doors.

Thus, forced to abandon a business which he had conducted without interruption for so many years, and desiring to continue to serve a large number of satisfied customers, Mr. Wilmerding has opened quarters at 27 Maiden Lane, New York, where he will accept and fill orders for photographic goods of standard make and quality, also for photo-finishing, framing, and commercial work of every description.

As Mr. Wilmerding has retained the technicians of the old firm, he is able to guarantee the same high-class work and service as in the past. Knowing the high reputation that characterized the business-policy of the Obrig Camera Company in the past, we can assure all who are interested that they need not hesitate to place their orders with Mr. Wilmerding—confident that they will be executed promptly and well.

A Session of German Photo-Dealers

A CONVENTION of the photographic dealers and manufacturers of the German Commonwealth took place at Stuttgart, Wurtemberg, May 11 to 13, 1920. The following frank and illuminating report (our own translation) is from the *Photographische Industrie*, a wide-awake and reliable weekly journal devoted to the interest of the German photographic industries; although the conditions of the photographic trade, as regards the dealer, differ greatly from those in the United States.

The German Photo-Dealers' League (E. V.) and the Association of Dealers in Photographic Supplies (E. V.) had taken advantage of the photographic exhibition, at Stuttgart, to hold a joint-session there, from the 11th to the 13th of May. This conference was very well attended by the members of both organizations. While the League had extended invitations for a committee-meeting, the Association held a full session. In the forefront of discussion, were, of course, questions of an economic nature. The present business-situation was treated in detail, partly in separate meetings and partly in joint-sessions. In a resolution, adopted unanimously by both associations, the industrial claims and wishes of the dealers were set forth, and the fact emphasized that, in view of the seriousness of the situation which at present confronts both trade and industry, in equal measure, the only possibility of overcoming these difficulties lay in the confident cooperation of both groups. In pursuance of this resolution, a conference was held with those manufacturers who had been present at Stuttgart, in the course of which conference expression was given, on behalf of the trade, to the necessity of agreeing upon joint-regulations for the payment due on goods already delivered, the adjustment of current orders, and facilities for quick disposition of goods. Special emphasis was given to the urgent necessity of simplifying the red-tape of the formalities which still are observed in connection with the exportation of individual cameras bought at retail—a process which may the more readily be achieved, in view of the fact that most photographic

supplies have already reached—and in part exceeded—the world-market prices. In addition, a demand was voiced for the granting of adequate arrangements for payment; and it was proposed that a bureau should be established for settlement, on the part of the dealers, of their surplus goods. It was only when the deliberations of the dealers were well under way, that this conference with the manufacturers was proposed, so that it could only serve both parties as a means to disseminate information of interest to both. Definitive resolutions will be postponed, for consideration at a session to be held the latter part of the month, at Dresden.

As the momentary difficulties, insofar as they affect the dealers, have arisen largely from the fact that factories have accepted orders only on the basis of prices subject to change without notice, and with no obligation to deliver within a definite period of time, but now, in spite of a complete change in market-conditions, insist on delivery at the earliest possible moment, it was a question—at least with reference to the future—to resort to preventive measures. We must return, as soon as possible, to the earlier status—recognized as self-evident—according to which purchasing- and delivery- contracts involve equal rights and obligations for buyer and seller alike. A one-sided obligation is absurd. The two associations of dealers were of the opinion that the situation could be remedied promptly only by joint action of all parties concerned; and they appeal, accordingly, in a second resolution, to the whole body of retail-dealers.

The interpretation frequently attached to the clause, "Prices variable; privilege to withhold delivery reserved," in accordance with which the purchaser is bound, while the seller has a free hand, is inconsistent with every sound conception of right and justice, and lacks a legal foundation. In its effects, it even goes so far as frequently to violate the principles of commercial etiquette. The recent extraordinary increases in prices, coupled with the very extensive deliveries which set in at the same time, have placed even concerns of sound financial credit in a very difficult position. We desire, accordingly, to issue to the whole retail-trade an emphatic warning not to subject itself any longer to the terms of such a clause; and recommend, instead, the embodiment of the following proviso in every future order: "Changes in price and in the terms of delivery release me from every obligation relative to acceptance of goods." It might be well, also, to fix the term of delivery. Only by virtue of joint-action will it be possible to compel the manufacturers to desist from their present one-sided practices.

The further deliberations of the two associations were restricted more to internal conditions. We may add that the German Photographic League (E. V.) again records a gratifying increase in its membership. The number of its members, since October, 1918, has doubled! This offers a favorable indication as to the growing perception of the need, even in the mercantile world, of the closest professional coöperation, and as to the widespread appreciation of the vigorous services of the League on behalf of the common interest. The session possessed special significance, by reason of the fact that it represented the first joint-meeting, for work of a coöperative nature, on the part of the two friendly associations, and that unanimity of opinion was achieved in connection with all the questions before the conference. The cordial personal relations obtaining between individual members of the two associations, furthermore, were attested by the arrangements for joint social gatherings.

The London Letter

(Continued from page 103)

sible; but on the strength of the head mistress' word, we risked a big plate and obtained a result which will serve its purpose. It is all that the Kent Education Committee required, although every face is not dead sharp.

While the Camera was being put together, one of us noticed that two children sitting in front had no small frames with colored balls. "Had they not better sit at the back?" we suggested, but the mistress told us that the Kent Education Committee would understand, and that new pupils were allowed only to listen the first day and to nurse big rag-dolls, three of which are kept for consolation-purposes!

Do the photographs we see in some of our daily illustrated papers really represent the psychology of the nation? We wonder, or-rather, we do not wonder; but feel sure that they are as little indicative of the present-day spirit as the chauvinism of the same press. It may fascinate a morbid few to see an actual photograph of the shooting of the French traitors, tied to posts with their eyes blindfolded; and some may gloat over the picture of the "accident to jockey that caused his death" and perhaps—though one almost doubts it—there may be strange folk who derive enjoyment from the photograph of "condemned man's family leaving the cell," but to the average person these photographs are, to say the very least, in execrable taste, and we do not feel proud of our *confrères* who made them. One knows that, to succeed as a press-photographer, it is of no use being thin-skinned, but to point a camera at a woman who has just said good-bye to her criminal husband must need a heart of stone and a front of brass.

But although most persons are shocked at these morbid and revolting photographs, there is no doubt that present-day taste is a good deal more sensational than it was, and there is a demand for a greater liveliness and action in news-photographs. In the old days, it was considered interesting enough to portray the Derby winner or the new Japanese tennis-champion at rest; but now they must be caught in action, and the more violent action the better.

The Daily Mail reflects this spirit in its pictures of the Derby. We not only have the usual photographs of the horses passing the winning post, but this year an innovation is made by introducing illustrations of the camera-men actually making their photographs (with reflex cameras, of course). Then more photographs of them rushing, apparatus in hand, to their car, in which they are shown developing the plates and making prints, while being taken at top speed to the Cricklewood aerodrome where we are given a glimpse of the airmen receiving the "stuff" to be delivered, as fast as wings will take it, to Manchester and Paris. This all sounds very breathless and exciting in print; but it is only fair to American readers to tell them that the pictures themselves were not quite so suggestive as one would have wished of the race against time. Also, to old-fashioned photographers, who have a weakness for definition and "quality," the results shown on the unsympathetic printing-surface of a daily paper seem hardly worth all the trouble and expense.

French Photo-Luxury Tax

THE peace of mind of the French photographers is threatened by the new luxury tax, which, if it goes into effect, will contain a clause to tax all photographic equipments that are over 300 francs in value.

SEPTEMBER

1920

25 CENTS

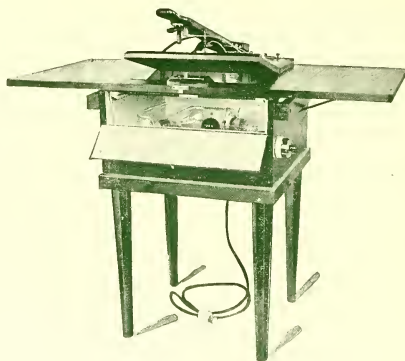
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THE FOUNTAIN
HARRY COUTANT



PHOTO-ERA

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Commercial Photography

HARRY A. COUTANT



AND now the Editor has asked me to write an article on commercial photography. An article that shall be illuminating, practical and helpful, with new ideas, and from a new angle. And this modest request is made by him, after issuing twelve numbers of his highly entertaining and instructive Magazine a year, for a long number of years, the pages of which have been filled with all this information, and much more, which he now asks from me. In making this assertion, I should be credited with knowing whereof I speak, when I further assert that I have been a constant reader for a great many years, and have gleaned therefrom some very useful knowledge—better, I know, than any I can give. I fear that he has given me a more difficult task than I can “get away” with. I should much rather grapple with and work out a new problem on some difficult piece of work which required a lot of experimenting to produce a finished result.

There is a new angle presented with nearly every new work one is called upon to do nowadays in photography; and, in developing those new angles, one must work out new problems, which he might have thought impossible of execution at first sight. The angle from which I like to view it is that nothing is impossible, and, if it can be done, we will do it, or at least make a good attempt. Sometimes, the reward is not commensurate with the time we spend on it; but we console ourselves with the thought that we have learned something new which we can practically apply the next time.

When you are asked to make photo-micrographs of tooth-powder, for instance, and show how finely divided our powder is, in comparison with the jagged-rocks that the other fellow is asking you to brush your teeth with, that is a rather new angle, isn't it?

The camera and that truth-stretcher of Biblical

lore must have been very closely related, one would imagine, in some instances. Here is one: A number of years ago I was asked to make a photograph of one of the industrial plants along the river-front. They had seen a beautiful photograph, made at Pittsburgh, entitled “Midst Steam and Smoke,” and which was published in several photographic magazines. They wanted a similar one made of their plant, showing lots of steam and smoke issuing from the smoke-pipes of the plant. After several attempts, I obtained a picture with some fine evening-clouds, as a background for the plant, with plenty of steam and smoke, issuing from the tall pipes, and silhouetted against the clouds. It was sent in, and I was congratulating myself that I had made something pretty good. I received a 'phone call the following morning and told to destroy the negative at once, and make another, showing no steam and smoke, whatever, which was much easier. It turned out that they had been served with a notice to show cause why they should not be removed as a public nuisance and menace to health, on complaint of citizens living in that vicinity. As they are still doing business at the old stand, I imagine that the second photograph must have turned the tide in their favor. This is given merely as an instance of one of the many angles referred to, and doesn't get us anywhere along the illuminating, practical and helpful lines; does it?

Having begun as an amateur, myself, I naturally take a great interest in his work, and have kept in quite close touch with the results turned out each year, especially in the way of pictorial work, as published in PHOTO-ERA and the other magazines. I think that I have run the whole gamut in amateur-photography from Carbon-printing, through gum-bichromate, brom-oil, and kindred processes down to Velox, and all kinds of plates and films; for the amateur is no



GATE-LODGE, FOXHOLLOW FARM

HARRY COUTANT

true amateur unless he tries everything once, and sometimes oftener. What would the supply houses do without him, and how could the manufacturers pay dividends? The amateurs are the backbone of the business. Why, I have made even two or more exposures on one plate or film; and I am proud to say that I haven't forgotten my skill in that respect, and do it yet, occasionally.

In the old days of the Society of Amateur Photographers, we used to turn out some pretty good work. We had quite a number of medal-winners, and when they got busy and competed in the various exhibitions, both here and abroad, they usually brought back the bacon, and a generous slice, too. In 1896 the members of that club brought back all the Photographic Society of India had to offer, in the way of medals, at their exhibition in Calcutta.

Perhaps, the Editor will think that I am taking up too much space with all this reminiscent-stuff, so I will stop it right now, and give a description of the methods, formulae, apparatus, etc., used for the production of the illustrations.

My printing-processes are varied. I use the papers which I have found will give the results

I wish to obtain from the negatives. There are any number of excellent papers to choose from. My work, being principally enlarging, I have found nothing better than the Kodak Bromide and chloride papers for this purpose. For contact-printing from larger plates, I use the Cameo and Impera papers, which give me the best of results, especially for sepia-work with the hypo-alum toning.

For the plates I use principally the Seed Non-Halation Ortho-chromatic, and the 23 for reproducing drawings in black and white. Sometimes, I use the Orthonon. I have still enough of the amateur left in me, however, to experiment with all kinds. I formerly used a good many of the Paget Fast Orthochromatic Backed plates, which I found to be the most satisfactory plate I had ever used. In 1913, I bought all the 8 x 10 and 11 x 14's the agents had, and kept some of them until 1918, and found no appreciable deterioration. But I have found that all plates keep well, if properly cared for. I recently had a rendered architectural drawing, highly colored, to photograph, and found that I had a box of the Seed L-Ortho Non-Halation, which I had bought in 1918,



BANKING-ROOM
HARTFORD NATIONAL BANK

HARRY COUTANT



RESIDENCE IN WESTCHESTER COUNTY

HARRY COUTANT

on hand. The plate gave me a perfect result, and did not show any signs of age. One of the contentions of Edward Wuestner, the manufacturer of the old Eagle plates, was that dry-plates, if packed face to face, without any separator between them, ripened and improved with age. He tried to obtain a patent on the idea; but, as I recollect, the Patent Office claimed there was no invention, and declined to grant his patent. I believe he was right. His results, at least, seemed to point that way.

All my Anastigmat lenses are of American production, and consist of the Tessars, 4/5 and 6.3, and the Protars, VIIa and series IV and V, of which latter I have quite an assortment of different foci.

When using large plates, it has been my habit to pick out my point of view, set up the camera, and then try my various lenses until I got on the groundglass the composition I wanted. For the past few years, however, I have reduced

everything to a one-size plate (5 x 7), which simplifies all processes, and gives me more satisfactory results. I find that I can always get all, and sometimes much more, than I want on that size of plate, and can then improve upon my original composition by enlargement.

My cameras are the Cycle Graphics, Sky-Scrapers, Graflex and Kodaks. I use the 4A Kodak a great deal, both with films and glass-plates, with the glass-plate attachment; and I have found that with several lenses of different foci, with that camera, I can do quite a number of photographic stunts. Never having been able to find much of anything in the average "finder," I had one built. It is a small box which slides on the top of camera with a shoe, easily attachable and removable, about $1\frac{1}{2} \times 2\frac{1}{2} \times 3\frac{1}{2}$ inches in size, with the lenses in it to give me a quarter of the size of the image, which my seven-inch Tessar puts on the plate. I can see and really "find" things with that Finder.



INNER COURT, APARTMENT HOUSE

HARRY COUTANT

In addition, it makes a good, little instrument for composition, and can be readily carried in the pocket when not in use.

My method of lighting is to let nature do it for me, on out-of-door work. I like to see the object to be photographed bathed in a rippling sunlight, preferably at an oblique angle, thereby intensifying the shadows by its vigor, and giving a modeling to the whole subject. The Fountain is a good illustration of the kind of lighting I prefer. This was patiently waited for, until the light was at just the right angle. With a full lighting, it would have been a totally different picture, in my opinion, and not of much pictorial value. For interior work, I prefer to use the natural lighting as far as possible. Frequently, I use one of the 400-Watt nitrogen bulbs, with the mirror-attachment—such as is

used in projection-lanterns—to light up dark corners and other parts that may require a touch of light. In large buildings, where I have the amperage, I use the 1000-Watt blue nitrogen bulb. Flashlight-work I seldom do, and then only where there are to be figures.

I have also become quite a convert to the use of cut-films; but there is nothing new in that. A good many years ago, Carbutt made an excellent orthochromatic cut film, with the advantage, in my opinion, that they had a ground backing, which gave a very pleasant diffusion in printing. As I print everything through a groundglass, perhaps that is why I liked them.

But, as we are only in our infancy yet, in matters and things photographic, let us hope the day will yet arrive when everything will be made just as we all like it. And when that



MAYOR MITCHELL'S FUNERAL

HARRY COUTANT



COLLIE PUP

HARRY COUTANT



COPY OF A PAINTING

HARRY COUTANT

time does arrive, let us hope, further, that two people will be found who can agree upon the artistic and technical merits of a photograph.

As to the developing-agents I use, the following three are my favorites. Which one I may use at any time will depend, of course, upon the nature of the work I am doing. If I wish to very much overexpose my plate, I use a double-coated plate, and use the following:

Water.....	40	ounces
Sodium Sulfite.....	3	ounces
Sodium Carbonate.....	2	ounces
Glycin.....	$\frac{1}{4}$	ounce
Hydrochinon.....	$\frac{1}{4}$	ounce
Potassium Bromide.....	60	grammes
Citric Acid.....	60	grammes

Dissolve the Sulfite in hot water, then the Glycin, next the Carbonate, then the Hydrochinon, and then the others. I keep the solu-

tion heating until all the chemicals are in and dissolved, by which time it is almost to the boiling-point. Then it is cooled, filtered, and put in glass-stoppered bottles, and is ready for use when required. The use of this developer requires a good stock of patience, as it works very slowly, but gives a fine printing negative. One can produce a thin or a dense negative with it, depending on how far development is carried. I usually develop until the image shows through slightly on back of plate.

The next formula I use is as follows:

Water.....	500	c.c.
Edinol.....	5	grammes
Sodium Sulfite.....	50	grammes
Hydrochinon.....	5	grammes
Potassium Carbonate.....	100	grammes
Potassium Bromide.....	1	gramme

Dissolve chemicals in order given, beginning



DOORWAY OF A COUNTRY HOUSE

HARRY COUTANT

with hot water, and keeping the heating up until all chemicals are dissolved. If you desire a little more contrast in your negatives, use 10 grammes of Hydrochinon. This developer I use for normal exposures in the proportion of one ounce of developer to eight ounces of water. If you have overexposed the plate, for any reason, start with one ounce to sixteen ounces of water or more, and add a little developer at a time, as you may see need of it, to build up the image gradually to the proper printing-density, or such density as you may like. I also use this developer for all the developing-papers, either contact or enlarging.

The other developer is:

No. 1	Water.....	30	ounces
	Sodium Sulfite.....	1	ounce
	Hydrochinon.....	1½	ounces
	Sulphuric Acid.....	60	minims

No. 2	Water.....	30	ounces
	Sodium Carbonate.....	1	ounce
	Potassium Carbonate.....	3	ounces
	Sodium Sulfite.....	3	ounces
	Potassium Bromide.....	120	grammes

Use equal parts of Nos. 1 and 2.

This developer I use largely in the production of negatives of drawings in black and white. It can be used as well, however, for other purposes, where a strong, vigorous negative is required. The same method of mixing the chemicals for this developer is employed as with the two others above noted.

I mix these developers in much larger quantities than expressed in the formulæ above given, and have found that they will keep in good condition for a year or more, if kept in filled, glass-stoppered bottles. All this, in spite of the warnings I see so often printed in



GARDEN PERGOLA, ON ESTATE
RED BANK, NEW JERSEY
HARRY COUTANT



HENRY MILLER'S THEATRE

HARRY COUTANT

the British formulæ, not to filter the developer after mixing, as it causes oxidation. The theory is, I suppose, that the air replaced during the process of filtering counteracts the air which you have supposedly driven out during the process of heating the mixture. For very fast work with fast plates, I have found the formulæ given with the Graflex 60 plates very satisfactory.

I do not limit myself, however, to these developers, but generally try every new developer that comes out, thus keeping a number in reserve for any special emergency. All of the new developers that I have tried, that have been produced in this country since the war, have given excellent results. As the Edinol, above referred to, is some I have had since 1914, and is about used up, I shall try to work out a formula from one or more of the many good developing-agents now produced in this country,

from which I am sure I can get just as good, or, perhaps, better results.



THE old masters in photography worked for all time. They were thorough students and careful observers. They discovered the limitations of the lens, and its tendency to distort and to misrepresent, and provided for that—not so much by modifying the negative as by arranging the sitter. In straight profiles, the iris was always plainly visible, because the sitter was asked to rest his eyes on an object slightly nearer the camera. To simulate the act of reading, or of looking at an object held or lying near the body, the eyes of the sitter were directed at a point nearer the camera. In similar poses, to-day, the sitter appears as if asleep. Observe, study, correct!

WILFRED A. FRENCH.

The Reason Why We Retouch

EDWARD DRUMMOND YOUNG



ALTHOUGH in many cases we retouch to improve *people*, in most it is because colors photograph differently. I do not want to be too elementary; on the other hand, it will be the easier way to make my argument clear if I dwell for a little on light. Light, of course, is composed of different colored rays, which mixed make white light. A rainbow is white light, striking through the rain and getting broken into its component colors. In looking through a triangular shaped piece of glass, a prism, you see a range of beautiful colors similar to a rainbow. This is due to the light passing through the triangular shape being refracted, splitting up into the different colored rays. All photographs are made by the blue-violet end of the spectrum, that is, that of the range of colors which make up white light; the blue-violet rays are the ones which make the photograph.

Now, human folk see mostly by the red and orange, as a large amount of the photographically active rays are invisible to the human eye. In the early days of photography it was usual to focus the image on the focusing-screen and then rack the screen forward slightly to get the shorter violet rays in focus, which gave a sharp photograph. Later on, lenses were improved and made of two different kinds of glass, which brought the visual light and the actinic light into the same focus. Now this seems a long way from retouching; but my contention is that the photographic image is a false image, and hence it is necessary to correct it very largely by retouching. Even the orthochromatic plates on the market can be handled with a large amount of orange or red light, and their sensitiveness to the violet is so much greater that one could not expose long enough for the yellows and reds without over-exposing the whole photograph.

Most fair people when photographed appear too dark, and very few photographic portraits render people as they look. You get blue eyes too light; shadows in the flesh are too dark, and you can therefore see why we use the reflector so much. A painter can see the color in the shadows, but with the photographer these photographs too dark.

Violet reflections from the skin photograph very quickly, and the shadows too slowly. In the ordinary case (to give detail) you have therefore to use a reflector. When you use a reflector, you very often find in a face that it

does not get into the corner of the eye-socket or that the line from the nose to the corner of the mouth and most wrinkles are exaggerated, because they do not get reflected light into them, and red preponderates in all living flesh. Here is the necessity for retouching to correct this defect in the various lights and shadows on the plate.

Now in retouching, it is often very difficult to distinguish in a negative between what is form and what is color-difference. In retouching, it is essential to know when to look for these things and also to know the construction of the face. Often the highlight of the nose is more like a ridge, and the planes of the sides appear concave instead of convex, on account of the stronger color, especially in sun-burnt faces. This is why we are so strongly insistent on the necessity of drawing to give a basis of sound construction. If you know the drawing of a face and how color photographs, any face will be comparatively easy as regards construction. When you can draw, you begin to see and realize the face. Roughly, there is a flat surface down the front of the nose and one on each side and one under the nose and across the forehead, and one down the temple and one from cheek-bone to chin. The whole face makes up into flat planes.

Study a bust by a cubist and you will more easily see the planes of the face. You have got to realize that the head is a very solid thing. Many photographs do not suggest this at all; the shape is there, and cannot be anything else but a head, but there is no solidity. That is why, if you draw from the skull and mask, you realize just where a photograph needs retouching.

Last year, I had to make a group-photograph with a very distinguished man in it. He moved in each exposure, and if we had not been able to make up that gentleman, the group would have been a very poor thing. In a case like this, knowledge of drawing enables you to be a help to your employer.

I have had a good deal of retouching through my hands, and some of it has not been very bright. It is lack of knowledge. Some people retouch so far and do not know enough to go further. In most cases, lack of drawing keeps a person from completing the work. With a knowledge of drawing, when you touch any form you keep the character, your appreciation of form being much stronger.

One girl came to me who had had a training in the life-school and could draw very well,



TWILIGHT

E. M. PRATT

After six lessons, she was taking in work professionally and doing very well. She knew what she was about. Another one who had no drawing was two years before she had any confidence in her work. If you can draw, you can retouch.

I have met a lot of people who say they cannot draw; but I find it very difficult to believe that. Some people will never draw well; but I have had poor-drawing students who made very appreciable progress in observation. They would not have made that progress had they not tried to draw, and this is shown in the negative—appreciation of form and character.

What we want is to have people in photography who appreciate portraiture in its best sense. Some people think they can learn to retouch with a few lessons, but we want distinguished retouching—work done by people who know what they are doing and show it. A person who is just putting in so many hours and looking for the end of the week is not going to make much of a photographer. It is very heartening in a class to find keen students. If you work with a will, the work becomes more interesting, and you retouch more quickly.

It is useless for persons to sit hours and hours at negatives if they never learn to retouch

properly. It is sheer waste of time. There is also a tendency among many students, I find, to be afraid of seeing the mark of the pencils. A strong touch on the negative is all right, if it is put on the right spot. It helps to get through the work more quickly and much better; firmer and more decisive.

I once saw a definition of retouching. "Never do with one touch what you can do with several." I think that is absolutely wrong. It seems to me absurd. If you can do with one touch, why use several? If you keep touch, touch, touching you get sloppy, poor work and loss of character. Another point is that you have very much more control over the negative if you put on open work and always have some of the film left to take on more touching where needed. The poor retoucher says, "I can't get this negative to take on more lead." I saw a good deal of terrible retouching in America; terrible is the only word for it. There was a place in Chicago where it was said that the proprietor kept a bust in a corner of the studio and turned all his photographs into the same shape. He took all drawing out of the necks and made them like bottles, and all the mouths were the same shape—Cupid's bows with a nice knifed edge. If the nose was a bit too irregular, he knifed it straight.



A PORTRAIT

NED MORTON

On the other hand, I met a man in America who was one of the finest retouchers I have ever come across. This man had a fine, big, open touch. I remember a lady was photographed who had a particularly wide mouth. He shifted the corner of the mouth along a bit, making it smaller without losing the characteristic shape, and you could not tell it on the negative. Of course, whether this is legitimate or not, is another story. He was a very skilful man, and did nothing else but retouching.

Retouching to my mind is a means to an end, not the end. If anybody, looking at a photograph in an ordinary manner, says, "That is fine retouching," you can take it that it is bad. I don't mean that, if your employer, in looking at your work, says that, because he is looking particularly at the retouching. Retouching-work is very important; you can do so much, for all the work of the studio becomes retouchers'

work. If you get a poor negative, you can make it look better. You can also make the best negative look poor, if the retouching is not done properly.

Often a photographer is asked to supply photographs without retouching. I did it once, taking the lady at her word. She got a fright and I lost a good customer. The public do not know what they are saying when they speak of retouching. So many people think retouching is merely to smooth and plaster up the face, whereas it is to help the portrait and, of course, to compensate for the defects in photography where colors photograph at different values. I always put this point before people who speak about retouching, as you cannot be too quick to kill a bad idea that is going about. You help the whole profession.

If you can retouch well and know what a face is like, should you get a negative slightly out of



"BUSTER"

F. E. LELAND

focus or moved, it should come out of your hands very much better, and this is a great help in a business.

Another point is retouching the edges. When you speak of an edge you think of, say, an edge of paper, but there are a whole lot of edges in the face which are often badly retouched; very few people can retouch the edge along the jaw really well. Another edge is the edge of the folded skin at the eye, the side planes of the nose where they touch the highlights. I once saw a very strong face, full of character. It was retouched right up to the edge of the eyes and had the most ghastly effect. One must be very chary in touching the eye. It is very important also when touching up against the hair not to take away the softness of the hair. The neck is also often over-retouched. We get hollows in the neck which have to be taken away as far as is consistent with human form, but the construction of the neck must be retained and not made to look like a badly modeled wax-bust. Looking at retouching from all points of view, I would say that it is not a natural thing. It is an outside thing you apply to photography; in fact, I would call it a convention.

In retouching a woman's negative you must keep it feminine and not try to emphasize mascu-

line characteristics. In the same way you cannot want to get a man's face and make it look like a woman's.

It is a great advantage to you students having this class in an art-college where you see a lot of the best art in the world—I mean particularly the sculpture work. You take these in unconsciously, teaching you to appreciate fine things, elevating your taste and permeating your ideas in business, and it is bound to be a help throughout the year in affecting your work for the better.

The British Journal.



THOUGH photography is now included among the fine arts, the practitioner may not exercise the privilege of a great portrait-painter, like Sargent, who arbitrarily represents his sitter with a freedom from conventionalism that is frequently startling. The photographer must please his patron by supplying what is requested of him, be the result attained by means of lighting, a soft-focus lens or by retouching. But he may always express his artistic individuality, through a willing sitter or a professional model.

WILFRED A. FRENCH.



ON MOUNT CHOCORUA
CHARLES F. MARVIN JR.



CARD DECORATION

FRED C. BABCOCK

Springtime and Winter

SIGISMUND BLUMANN

PHOTOGRAPHY is a gentle pastime, a pensive sport. On the hunt it makes no loud explosions to spoil the sabbath-stillness of the woods, nor does it give pleasure in killing. What the photographer shoots survives its own life and lives till more durable things than flesh shall decay. And we photographers are a peculiar lot. To the aggressive fellow, the sharp-eyed, chest-to-the-wind, shoulder-his-way succeder in worldly ways, we are nondescripts to be vaguely classified, if classified at all, amongst dreamers, poets, hobbyists, and freaks. But we get so much out of our art, if you will, that we shoulder the burden of indulgent contempt and go on our way. To us Nature in her visible forus does, indeed, speak a various language—a language as unknown to the common herd as

the speech of ants and grass. A primrose by the river's brim is more to us than to them. And we foregather with our kind.

Tom was one of us to the full, till he bought a car. Now though he takes his camera with him still, he never gets far enough from the well-made highway to find pictures. So, of us three, who used to roam the earned spots that lie deep in the hills, only Old Man Hale and I remain to the weekly meeting and long tramps. Old Man Hale, who began by making his own wetplates and carried a whole laboratory and darkroom on his then sturdy back in days that were and are agone! The Old Codger we call him, "Codger" for short, and helikes the title. He is past seventy now and laughs at our complaint at the weight of our equipment. And his faded blue eyes see pictures that we are likely to pass. He



THE OLD CIDER-MILL.

WILFRED A. FRENCH

makes no complaints of the surging tide of younger men who swirl past him and toss his seasoned bark rudely. To the contrary, he says that having lost the zest of parading behind the band, he likes to stand on the sidewalk and cheer the procession. "I can't fight for the ball against the huskies any more, but I can root for the better team and cheer when a goal is made. I am pater to two generations, but my alma mater is as dear to me as if the old buildings weren't torn down, the quad paved where the green grass grew, and you youngsters are entitled to your day, as I was to mine."

You youngsters, meaning me, who have already put most of my locks on the altar of time and who feel a patriarch in my forties. Dear old Codger! You should see his camera. It is one of those new-fangled kinds (to him). Why, he boasts that it has a tapered bellows. There is no rack and pinion—to move the lens forward; one loosens a clamping-screw and pulls or pushes the thing to position. There is no spring-actuated back. The groundglass drops away on a hinge at the bottom and the plateholder is held in its place by lugs. It weighs in the neighborhood of twenty pounds. Its nameplate shows that it saw the light of day when Anthony and Scovill were alive, and before Ansco was born. Why Eastman, that patron-saint of modern photography, was in short trousers when Codger's box was made. But it gets pictures. It is like the country-boy's bough, string and bent pin that gets the fish where the steel-rod, silk-line, and patent fly land nothing. He, himself, gives the best reason for this. "You see, youngster, when I used to go out for pictures, I packed this box, a case of chemicals, a small-sized tent, and a tripod that was some lumber. I couldn't afford to miss anything by the way through careless oversight. And it was rather troublesome to coat fresh plates, so the exposure had to be right. It had the effect of training me, sort of."

There we have it. All our improvements have made us rely more and more on the manufacturer and the chemist. We have every sort of adjustment on the camera, the shutter measures our time, the plates are lightning-fast and then give latitude, and about all we have to know is how to read the exposure-meter so as to estimate the amount of time to give, and proceed accordingly. And we complain of the materials and blame the maker when we over- or underexpose, or mix a developer with the carbonate left out.

A day in the open with Old Codger is a day with Homer. It opens to a thoughtful one the proportions and perspectives of life. One learns

not only things photographic, but things philosophic.

He has promised to will me his paraphernalia; but though I am shy to tell him so, he has already given me so much from the richness of his experience and the breadth of his soul, that anything more material were an anticlimax. Long may he live and be able to tramp, and may some younger fellow be with him to lend a hand over a rocky way, and to relieve the bent shoulders of part of their load. But, alas, spring and winter never come together. If the warmth of June did not melt December's snow, the ice of that austere season might congeal the buds, and it could happen that the two seasons came at once. Things are best as they are.

About the roots of the green sapling lie

The fertile soils of full a thousand years.

Season on season of dropped leaves, decayed;

Leaves on the sheen of which the sun once played.

Yet dream not that the growing upstart fears
It, too, shall thrive, and have its day, and die.

Nor hope the young shall e'er consideration give

To those who went before and blazed the way.

Old men have had their chances and must take
their age.

Life is a written book—turned over page by page,

Nor shall the reader backward turn or stay
Upon a twice-read leaf. Read on to live.

Youth is the time to know, to hope, to do.

What if mistakes do come, and failures, now and
then—

The pliant spirits of the young bend to the gale

And rise when it has passed. When we grow stale,

And happiness is but content and consolation, when
The wintry hoar is on us thick, let us not rue.

That sapling does not mourn o'er fallen leaf,

That youngster stops not on his way, to weep

Upon the mound that marks old Bygone's grave.

Enough our flagging energies to save

Adown Life's last, green, pleasant slope to creep,
Satisfied in having lived, to die—and forego grief.

Thus, and we have lived in peace or strife,

May our past deeds enrich the coming years

For those who follow: And may Youth be drest

In all the finery it craves. May it be blest

With that assurance which shall conquer. Tears
Are for us, for we have done. For them is Life.



"NATURE is man's teacher. She unfolds her treasures to his search, unseals his eye, illumines his mind and purifies his heart; and influence breathes from all the sights and sounds of her existence."



RISING MIST IN ZION CANYON
HERBERT W. GLEASON

Copyright-Decisions Regarding Photographs



SUBJECT that has engaged the attention of photographers for many years, and one which ought to be settled by an international court, is the protected rights to a photograph. *Studio Light*, the illustrated monthly house-organ of the Eastman Kodak Company, in a recent issue published an interesting series of articles regarding decisions by legal authorities on the copyright of photographs. In commenting on these decisions and similar cases in Great Britain, the *British Journal of Photography* expresses itself as follows: "In most cases the views taken are those which would be expressed by an English Court in accordance with the present Copyright Act, but they are nevertheless interesting as reflecting American judicial opinion. Our only regret is that *Studio Light* has not added the titles of the cases in which they arose, and given references to official or unofficial publications containing reports of the proceedings.

"We have become so accustomed to the copyrighting of photographs that it seems impossible that a question could ever have arisen on the subject. Yet it took a decision of the United States Supreme Court to decide that the words 'author' and 'writings' used in the Constitution (before photography had been discovered) were broad enough to cover a photographer and his work.

"The Court laid considerable stress on the fact that the purpose of the Constitutional Provision is to promote science and the useful arts, and the decision was that not all photographs were copyrightable, but only those which showed the exercise of taste or artistic choice, or made an appeal to the higher emotions. The earlier lower court decisions were not so favorable, as they had shown a tendency to restrict pictures that could thus be registered. A price-catalog containing numerous cuts of bath-tubs, wash-bowls, etc., made from photographs, was held not a proper subject for copyright.

"Similarly, a series of photographs of furniture, used in a catalog, were held not registrable by copyright, and the Court seemed to think that any photograph or picture, no matter how attractive in itself, if intended for advertising-purposes, could not be copyrighted. This was rather discouraging. The Supreme Court again came to the rescue, as it were, with a decision holding that designs of circus-posters in rather lurid colors and with the attention-attracting features that a circus-poster generally embodies, and showing ballet-dancers, living pictures and

acrobatic performers, were properly subjects for copyright, since such pictures required a considerable degree of skill of selection and design to be successful in their intended purpose, which was considered a useful one. This gave protection to advertising-pictures, and was the beginning of decisions that were helpful to photographic copyright.

"Other decisions have held as properly subject to copyright-protection, catalogs including photographic reproductions of plaster statues for church-decorations, cuts of brass goods, electric fixtures, etc., and models wearing newly designed and attractive apparel—lines of work in which photography has been used extensively. In these it was pointed out that commercial photography and illustrating required a high degree of skill and taste and a knowledge of lighting, etc. It is thus apparent that there is a tendency to broaden the scope of copyright-protection to cover any useful reproductions and to organize the skill and taste and originality of the photographer.

"PROTECTION AFFORDED BY COPYRIGHT

"One defendant who reproduced a copyrighted photograph of a public library on Fifth Avenue, New York, urged as a defence that a picture of a public building cannot be so protected, as anyone has the right to photograph it, but the Court pointed out that the selection of a proper time and kind of day, viewpoint and selection of grouping in the traffic showed artistic ability and that the picture was properly registered. This was, indeed, a very interesting and important decision.

"The above leads up to the question of what the protection afforded by a copyright is. Obviously, anyone could photograph a public library and from the same viewpoint, but one person cannot, by copyrighting one photograph, prevent others from using the same material, whether it be a building, a monument, a mountain, a general landscape or a person. This is discussed at length in the decision last mentioned.

"Another interesting case was that of a photographer who copyrighted some photographs of Mmc. Loie Fuller in various dancing poses. A newspaper printed some wood-cuts of the same person in dancing poses. A comparison showed that they were not apparently copies of the photographs and there was no infringement. The photographer could not prevent others from making pictures of the same poses. The copyright was of the photograph only, not of the dancer and her dancing poses.



RUTH ST. DENIS

Courtesy of Pictorial Photography in America 1920

BY THE LATE LIEUT. LUKE R. VICKERS

"A case involving a somewhat similar point, but even more interesting, was that in which a photograph of a young lady was made and copyrighted as 'Grace of Youth,' and all rights therein sold by the artist. Two years later the same photographer took a picture of the same model in practically the identical posture of the first picture. The only apparent differences were that the young lady was smiling and held a cherry stem in her mouth. The picture was entitled 'Cherry Ripe.'

"In the discussion of the case the court said that a copyright does not cover anything but the picture, that any other artist could use the same material and make a new picture that so closely resembled the copyrighted one that it would pass for it and would not be infringing the copyright. But in this case when the same artist did this, he was considered to be using the experience gained in making the first picture in making what was in many ways a duplicate of his first picture, the rights to which he had sold, and was held to be infringing what had been his own copyright. He had been able to sell his rights in the picture because the copyright made it of special value, but the law did not protect

him in using his experience to make a second picture which would, in a measure, destroy the value of the first, for which he had been paid. Such decisions of the Courts give one a wholesome respect for the justice with which our laws are interpreted.

"From such decisions one obtains not only a good knowledge of the law, but its application as well, and as similar cases may arise at any time, a knowledge of previous interpretations of a point of law may prove very useful."



PHOTOGRAPHY is an exacting art. The careless camerist working in the open finds it so, even to the point of exasperation. Among the annoyances that mark the finished negative are pinholes—the result of dust. The camerist should dust not only his plates, but the inside of the plateholders before filling them. Dust, which is present everywhere, is likely to enter the camera—unless protected,—through crevices caused by the shrinkage of parts, or through apertures in the shutter. When not in actual use, the camera should rest in the carrying-case.

W. A. F.

The Big Question

FREDERICK C. DAVIS

THE reason why some inventive genius has not yet compounded an emulsion which is not so particular as to how much light falls on it, is not clear. But since that very marvelous substance has not yet been invented, photographers, both amateur and professional, must go on with the question of exposure which continues to be the greatest problem in photography.

Most amateurs have an idea that the emulsion on the film or plate is a most marvelously sensitive compound. I have seen amateurs, who actually knew better, give an exposure of one one-hundredth of a second at U.S. 16, in deep shade, because they were afraid that they would overexpose the film! I have also heard of an amateur who gave a moonlight-scene an exposure of ten seconds and then was frightened lest he had ruined the result by overexposure!

On the other hand, I have seen amateurs who understood the value and power of light far better than most professionals do. I have seen them give five times the exposure usually given for a certain subject and bring from the darkroom a perfect print—or as perfect as any print could be.

Exposure-meters are the means of saving vast amounts of time and money for most amateurs, and then, again, they are the means of much misunderstanding. If a meter says that an exposure of one second is about right, nothing short of an earthquake would induce the average amateur to give the slightest fraction of a second under or over that.

The one thing that should be impressed deeply on the mind of the photographer is that emulsions are not so fast as lightning—that it requires time to affect the plate, no matter how strong the light—that an overexposed plate is far, far better than an underexposed one—and that an overexposed plate is much nearer reclamation by after-processes than an underexposed one.

The exposures given according to most meters indicate the *minimum* time for such conditions. Following out these calculated exposures will result in a plate which will show, quite often, that while it is all very well as it is, a little longer exposure would have improved it.

How many amateurs, photographing an interior, have debated long in their minds whether to give five seconds or seven, or some like figures! The difference between an exposure of five seconds and one of seven appears to be very great—but it isn't! It is quite true that two

plates exposed under identical conditions indoors, one for five seconds and one for seven, will show very little difference between them, and what differences there are will certainly not show in the print. We can therefore compound the very sensible rule that: if an exposure is to be lengthened, *double it*; if an exposure is to be lessened (if it should be lessened at all) *halve it*. I have seen many amateurs reluctantly give up fine chances for wonderful speed-pictures because, they said, while their shutter was fast enough, the lens wasn't quite so—it was only $f/6.3$ when it should be $f/4.5$, etc., etc.

Now let us take this into serious consideration. Let us say that we are using $f/8$, and we give an exposure of $1/25$ of a second. This, under average conditions, is about right. Then, say, we shorten, on account of motion of the subject, the exposure to $1/100$ of a second. The average amateur would never do this—afraid that his plate would be underexposed, when, in reality, the difference between the lengths of the two exposures is but $3/100$ of a second; and I am willing to wager that an exposure of $3/100$ of a second added to the correct, or subtracted from the correct exposure for a subject, will never, even under very powerful light-conditions, affect the emulsion enough even to slightly affect its printing-qualities.

Here we have an amateur who ordinarily gives the average view about $1/25$ of a second at $f/11$. He absolutely will not, even with his lens opened to $f/6.3$, give an exposure of $1/300$ of a second—says that it will spoil his plate by underexposure. The actual difference between these two exposures is only $1/150$ of a second. This difference, on an average view with the change of stops as above, would certainly make extremely little difference in the print, *if it could be distinguished at all*.

Here we have a professional engaged in making a copy. He decides, with some uncertainty, that an exposure of two minutes would be right. But, being uneasy, he decides to make one plate at two minutes and another at three, for safety. Imagine his surprise when the plates are developed, that he is unable by examining the two plates, to find any difference in them. Or if there is any difference at all, it is so slight as to be almost indistinguishable and would certainly not show at all in the print. For, what difference could one half the exposure, additional, make? Very much, do you think? Then let us take another condition.

Let us suppose that we have figured that the correct exposure for a certain condition is 1/50 of a second. But, being uncertain, we decide to give one plate that exposure, and the other one half more than that—the same as the above copying-example. The second exposure would then be 1/33 of a second, or, roughly, 1/30. I challenge the greatest expert in the world to show me the difference between the two plates, one exposure at 1/50 of a second, and the other at 1/30 of a second, taken under the same conditions, and finished under the same processes. *There is no difference.* The one exposure is 1,100 of a second longer than the other, and the addition or subtraction of that length of exposure *will have absolutely no effect which will be distinguishable in the print.*

The amateur is far too frugal with his exposure. The one supreme rule for deciding the exposure is—*be generous.*

Let us take up the advantages of being generous.

First, if an exposure is not long enough, the plate is underexposed, and, if the exposure is too long, the plate is overexposed. Certainly, between these two, the overexposed plate has the advantage, for it can be reduced, whereas the underexposed plate cannot be intensified. By means of a strong light, the overexposed plate can be printed with good results, whereas the underexposed plate will always give a dull, gray, lifeless print.

Certainly, one extreme is as much to be avoided as the other, but just as certain is the fact that the one extreme has an immense advantage over the other.

A very great mistake is made, not alone in regard to shutter-speed but to stop-size. The average amateur and professional photographers believe that for every size stop larger, the exposure should be halved, and for every stop smaller, the exposure should be doubled. This is, perhaps, generally believed by ninety-eight percent of all photographers; but, in general practice, it works out quite differently.

The power of the light to affect the emulsion is *very different from the volume or brightness* of the light. While the volume of the light may be reduced one half by each smaller stop, the actinic power of the light is reduced much more. In very short exposures, and large stops, this difference is not so noticeable; but with longer exposures and small stops, the dissimilarity is certainly very obvious.

To explain: Let us suppose that an express-train were speeding along at the rate of thirty miles an hour, and on a track parallel to it another were speeding at the rate of sixty miles per hour. Now, suppose that each of them put

on the brake as they reached a certain spot. We would find that, if the slower train had stopped at one quarter of a mile up the track from the place where the brake was applied, that the faster train would not stop one half mile away, or *twice* that distance, but it would stop one mile away, or *four* times that distance. This is a law of physics. The trains have momentum, not directly proportional to their velocity, but in direct proportion to the *square* of their velocity.

Likewise, the exposure should not be directly in proportion to the size of the stop, but in *direct proportion to the square of the size of the stop.* For this, a table to simplify matters would be very welcome.

The top row is the f/ numbers; the second, the U.S. numbers; the third the relative exposure generally believed necessary; and, fourth, the exposure really necessary.

f/4	f/5.6	f/8	f/11	f/16	f/22	f/32	f/45
U.S. 1	2	4	8	16	32	64	128
1	2	4	8	16	32	64	128
1	4	16	64	256	1,024	4,096	16,384

In other words, if a one-second exposure is necessary at stop f/4, and the stop was reduced to f/5.6, the exposure would not then be *two* seconds, as generally believed, but *four* seconds.

These very great differences account for the very great rapidity of the larger lens-apertures and the very slow speed of the smaller ones. This amazing difference has been pointed out by Gaston M. Alves and others of notable rank, and it would be well to try out the new exposures, for, as these men point out, the *quantity* of light, and the *chemical activity* of the quantity of light are two different and independent things.

A very simple table for use with these new values is as follows. It is merely necessary to find the exposure for any one stop and, by finding the row of figures directly under that stop, the relative exposures of the other stops can be found by multiplying the exposure of the first stop by the number in the row under the stop which is to be used.

The table:

f/4	f/5.6	f/8	f/11	f/16	f/22	f/32	f/45
1	4	16	64	256	1,024	4,096	16,384
	1	4	16	64	256	1,024	4,096
		1	4	16	64	256	1,024
			1	4	16	64	256
				1	4	16	64
					1	4	16
						1	4

An example of the use of the table is simple. Let us suppose that you have computed the correct exposure for, say, stop f/8, and, say, that the exposure is one second. Then, you decide to use stop f/11, which is the next smaller



A THRILLING MOMENT

HARRY L. PLUMMER

stop, and you desire to know, in this new system, what exposure would be right. Under the column, " $f/8$," the lowest figure will be a 1. Then, under the stop-column you use, in the same line, in this case, " $f/11$," you will find the number by which to multiply your exposure—in this case, 4. So, multiplying your exposure, one second, by four, we have the correct exposure for stop $f/11$, which is, under this example, four seconds.

Another: with $1/25$ at $f/16$, how much at $f/32$? By referring to the columns, we find that $f/22$ requires 16 times as much exposure as $f/16$, and sixteen times the $1/25$ of a second, gives, roughly, two thirds of a second, or, to be exact, $16/25$ of a second, which can be roughly and conveniently called $16/34$ of a second, the difference being only $73/2400$ of a second.

This new system is not at all as confusing, as it looks at first sight, for it is only necessary to remember that if you have a certain exposure at a certain stop, the exposure would be four times as long for the next smaller stop, and one fourth as long for the next smallest stop.

It would be well, to get the exposure absolutely correct, to compute the exposure your subject would require at $f/4$ or U.S.1, and then figure the exposure for the stop you wish to use, by means of the second table given above.

The wide variation will give more correctly and naturally toned prints. All fear of overexposure should be swept from the mind; but

all fear of underexposure, you should certainly heed. It is clear that the above system gives the lesser chance of underexposure, and on this account it should be more in use than the old, inadequate, and erroneous one.

In every collection of photographs, there is about one overexposed plate to over one hundred underexposed ones, or ones which could be improved by more exposure. And there are about ninety in every hundred of plates, which could be improved by a longer exposure.

As soon as the photographer gets the belief out of his mind that his emulsion is so wonderfully sensitive, that soon will he get much better results. Don't be afraid to give what you think is too long (but not what you *know* is too long) an exposure, for, in all cases of exposure, there are only two words which will bring the results you most desire, and those are—*Be generous*.

[It must not be inferred that, in urging his individual system of exposures, Mr. Davis utterly condemns the old and favorite practice of doubling the exposure of the preceding stop and halving that of the succeeding one, when using the f -system of numbering stops. Mr. Davis obviously aims to induce workers to avoid underexposure, in general practice, by advocating much more time than hitherto given—even to the extent of doubling the amount of what is usually allotted. It remains for the reader to try Mr. Davis' system of exposures, to determine its permanent utility. Ed.]

Experiments in Developing Exposed Plates in Bright Light

DR. LÜPPO-CRAMER

HE inconvenience of having to undertake the development of exposed plates by red light in the darkroom, and the difficulty in many cases of judging the progress of the operation by weak light, have often led to suggestions for dispensing with the darkroom—at least after exposure. It was first sought to accomplish this object by immersing the plate after exposure in a red dye, or by adding the red dye to the developer. So Ludwig took out a German patent in 1901 for the Coxin process, and Lumière and Seyewetz brought out for the same purpose their Chrysosulphite, —a mixture of magnesium picrate and sulphite that was added to the developer. This method, which consisted in substituting a colored solution for the red light of the darkroom, had several serious drawbacks which have not yet been overcome. It was complained that control of development by reflected light, or, better, by transmitted light, could be effected only in a vertical tank, and that the necessarily strong coloring of the developer prevented any control of development by reflected light. The coloring-matter also stained the fingers and clothes in a disagreeable way.

Another plan was taken up by R. Freund with his Actinal method. His idea was to render the silver bromide insensitive to light after exposure by immersing the plate in a solution of potassium iodide, thus transforming the bromide into the less sensitive iodide of silver. From the records of Freund, himself, we learn the theoretically foreseen disadvantages of the method. He says that the exposure must be *abundant*, that the negatives come out *thinner than usual*, so that in printing it was necessary to use very hard-working paper. Dr. Eder also remarked, at the time, regarding Freund's suggestions: "Iodide of potassium at once partly destroys the latent light-image, viz., the slightly exposed portions of the picture, for which reason the process is of doubtful value." All other agencies that are capable of oxidizing or halogenizing silver act fundamentally the same as the iodide: they reduce or destroy the sensitiveness, it is true, but at the same time they destroy to a greater or lesser degree the latent image. In certain circumstances, they also produce chemical fog. As long ago as in 1901, the writer found that the sensitiveness of the plate in the ready-

mixed developers, especially those of the paramidophenol class, is so greatly reduced that, with a little precaution one can develop plates in the presence of a light-source that would totally fog the dryplate, or when immersed in water or hydroquinone developer. The sensitiveness of the silver bromide will be reduced much more strongly by a very dilute watery solution of amidol than by any ready-mixed developing-solution, and it was not difficult to try whether this substance might not really be utilized to make possible the development of exposed plates in an ordinary clear light.

It was shown by the writer that an oxidized solution of amidol, first described by Mercier, is to be accepted purely and simply as a reducer of the sensitiveness of silver bromide, and that the oxidizing of the solution in this operation is not only superfluous, but actually injurious. By bathing an ordinary dryplate for one minute in a two-to-five per cent. solution of diamidophenol hydrochloride (amidol) in distilled water, and drying immediately, the plate will retain only a fraction of its original light-sensitiveness. This reduction of sensitiveness is figured out to be from fifty to one hundred per cent. It therefore seems possible, by using a preliminary bath of amidol, to so suppress the sensitiveness of the plate that a very bright yellow light can be used in the development proper.

If an exposed plate is bathed with exclusion of actinic light for one minute in a five per cent. solution of amidol, and it is then removed from the solution and placed with a test-plate in an ordinary developer, a very clear yellow light may be used during the normal duration of development without injury to the previously bathed plate, whereas the unbathed test-plate will be heavily fogged. There is no injurious action on the latent image. I used for this experiment a five-candle lamp protected by a light-yellow glass; development was done at one and a half meters from this. The development proceeded in the manner described, without ill effect, in metol, metol-hydroquinone, hydroquinone, pyrogallol, pyrocatechin, amidol plus sulphite, paramidophenol-potash and rodinal. With glycine a dichroitic fog showed on the pre-bathed plate. In the hydroquinone developer, the amidol bath (even when the plate was washed after the bath) caused an extraordinarily strong acceleration of development, so

that the peculiarity of the hydroquinone to work slowly was lost. A very small quantity of amidol added to the hydroquinone also caused an enormous hastening of development. A preliminary bath of triamidobenzol works similarly to the amidol; on the other hand, diamidoresorcin (two different isomers), triamidotoluol and triamidophenol (all hydrochloric salts) failed to work.

The use of the amidol preliminary bath, for the purpose described and under the conditions noted, may in certain cases be of utility to many photographers. In any event, the process is not without interest. To be sure, the reduction of sensitiveness by the amidol in the various experiments was not nearly so strong as when the bathed plates were exposed with test-plates and then developed. On the one hand, the

developing-solutions work quite strongly against sensitiveness and, on the other hand, the amidol in presence of the developing-solution is not so active as in the pure state. It has already been remarked that the action of pure diamidophenol hydrochloride is incomparably stronger than when mixed with sulphite, as is the case with the regular amidol developer. The addition of bisulphite also weakens the action of the amidol quite noticeably as a reducer of sensitiveness of silver bromide plates.

Hence amidol and triamidobenzol are at present the only known substances that, although not coloring-materials, reduce in a practical way the sensitiveness of silver bromide plates and can be used for the purpose indicated.

Die Photographische Industrie.

Gum Bichromate—The Cheapest Printing-Process

F. M. LEYCESTER

THOSE who find it necessary to study economy in the pursuit of their hobby should not lose sight of the fact that in the gum-bichromate process they have the very cheapest process of any. In fact, its cost is virtually that of any good cartridge-paper on which to make the prints, plus perhaps five per cent., or even less, for the chemicals which are applied to it. Except for very small prints, it is quite suitable for any size of picture.

The first step in making gum-prints is to prepare the sensitizing-solution. For this purpose, we weigh out two hundred grains of clean gum arabic, tie it up in a muslin-bag and hang it in an ounce of water. In a day or two the gum will have dissolved, and any impurities left in the bag may be thrown away. A ten per cent. solution of potassium bichromate may also be made up.

A sheet of paper, which may be white cartridge or some similar kind, is laid on a drawing board, with a few pieces of newspaper a little larger than itself underneath it, and pinned down. A thick cream of moist watercolor and of the gum-solution is mixed up, and is then thinned by the addition of about twice its bulk of the bichromate-solution. Ivory black, raw umber, and burnt umber are good colors to begin with: and the gum and pigment must be mixed together most thoroughly before adding the bichromate.

With a flat camel-hair or varnish brush the mixture is applied to the surface of the paper. Only a very thin coating should be given, not enough to do more than give it an olive color,

even with the black; and the brush strokes should be crossed to get the layer as regular as possible. It is customary to advocate at this stage the use of a "badger softener"—a costly article—to even up the coating, but this can be done quite satisfactorily by means of a cheap hat-brush. It is held with the hairs vertical to the paper, and dabbed lightly over until all brush marks in the coating are invisible. If the brushes are well washed in cold water immediately after use they will last in good condition for a long time.

The paper soon dries. If the coating is done in the evening, it will probably be quite dry before one goes to bed, and may be put away in a light-tight box or drawer for use the next day. The coating can be done by artificial light, without any precaution, or it can be carried out in weak daylight, provided the paper is not left to dry in the daylight; as it becomes sensitive on drying. It is best not to coat more paper than is required for immediate use, as, although it can be kept for a few days, it begins to deteriorate from the very first.

Printing is carried out by daylight, the best prints being obtained from negatives that are not too strong. If they give good prints on ordinary gas-light paper they will be found to be of the right depth for gum-printing.

As the image is faintly visible only during printing, a print-meter of some kind is necessary. M. Demachy's plan is simple and all that is needed. A little of the bichromate solution is brushed over a piece of plain paper and dried

in the dark. This paper can then be cut up into strips a quarter of an inch wide. One such strip is shut up in a book with half an inch protruding, and is left exposed to daylight for an hour or two, or until it has gone as dark as it will. On starting to print, the strip is pulled out a little more, and exposed beside the printing frame. The freshly exposed piece gradually darkens until it matches the first. When this stage is reached the print-meter is said to register "one tint," and the paper is pulled out a little further for a second tint to be reached in the same way. The exposure required varies with the negative, with the pigment, and with its depth, but is usually from two tints upwards.

fix the picture to the paper that, if there is any trace of stain left on the paper from the bichromate, it can be wetted again, putting it this time in a two per cent. solution of potassium metabisulphite, or of acidified sulphite. This will remove the stain, and the print is then given two or three changes of water and dried.

The process as here described is a perfectly straightforward one, and is not intended for those who wish to exercise "control" over their prints. Carried out carefully in this way it should be possible to make half a dozen practically identical prints from the same negative. It is a good plan to have mastered the process to this extent before attempting anything in the



YOUNG KINGFISHER

DR. J. B. PARDOE

There are various ways in which a gum-bichromate print can be developed; but if granularity is to be avoided it is best to adopt the plan of immersing the print face upwards for a minute or so in cold water and then allowing it to float face downwards on the surface, taking great care to avoid air-bells under it, and also to avoid touching the surface with anything solid. It can be raised at intervals of four or five minutes, and it will be seen on doing so that the pigment is gradually falling away from the paper in those parts where the light has had least action, and is leaving the picture more and more visible.

When the action of development has gone far enough, the print is drained for a few moments and then laid face upwards on a folded towel or similar absorbent surface to dry. If this is done in daylight the action of the light will so

way of "control"; but when this is wanted it can be got by developing with water with which a proportion of fine sawdust has been mixed, pouring this mixture of water and sawdust over those parts of the picture which are to be lightened. Prints to be treated in this way should be exposed a little longer than those developed automatically.

Another method of control, which was carried out very successfully by Mr. Mummery, was to develop by means of a fine spray of water. For this purpose, it is necessary to print very lightly. The print is wetted for a few moments, and is then laid upon a sheet of glass in an almost vertical position. A spray-diffuser is used to direct the water on to the surface, and in this way to wash away more or less of the pigment as may seem to be necessary.

The Amateur Photographer.



CLOUD-EFFECT NEAR NORWAY, MAINE



EDITORIAL



White Areas on Gaslight-Prints

A SUBSCRIBER sends us a number of 5 x 7 enlarged gaslight-prints, with the original $2\frac{1}{4}$ x $3\frac{1}{4}$ film-negatives, which show light areas as if the negative had been fogged in several places. A careful investigation shows that these white patches or areas are nothing but the result of uneven action of the developer. He states that he developed these 5 x 7 prints in a 5 x 7 tray. No wonder! PHOTO-ERA has always insisted that such a practice is false economy, and that a tray much larger than the size of the print be used.

The reason is that, when used in so small a tray, the solution has little chance to remain homogeneous (uniform in character). If used at full strength, the action is very quick and out of control. In that case a print will be developed in a few seconds, and the result of the uneven action of the developer will be more marked. It is recommended that the developing-solution be diluted, so that its action may be retarded and the operation more deliberate.

In any case, 5 x 7 prints should not be developed in a tray smaller than an 8 x 10, and the solution should be agitated by rocking the tray. This procedure is all the more necessary in case one insist on using a tray about the size of the print; and, in this way, the uneven action of the solution can be avoided. It is poor judgment to economize in the size of the tray and in the quantity of the developing-solution—whether it is a question of plates, films or prints.

Ruby-Light Darkroom-Windows

A DARKROOM-WINDOW that is completely darkened, except for a space covered by ruby glass through which daylight is admitted, is very apt to fog photographically sensitive material. It may be that the sheet of ruby glass used for this purpose is what is known as gold-flashed ruby-glass, which permits the passage of actinic rays; whereas one should use copper-flashed ruby glass, which may be procured from any reliable photo-dealer or from a dealer in colored glass. If one will examine a piece of the former by means of a spectroscope—while holding the glass against the sun—one will perceive violet or blue rays; whereas, in the cop-

per-flashed variety, these actinic rays will not be noticeable. However, inasmuch as daylight is variable, one should not use it as a source of light; nor should one utilize ruby glass or even several thicknesses of deep orange glass, or what is known as orange of ruby fabric. The best plan is to make the darkroom light-tight, and procure a good darkroom-lantern—size immaterial, so long as it is a safe light. Through the use of such a lamp for developing plates, films or prints, the worker will obtain a standard light for his work, so that he will always know what he is doing. He can thus gauge the proper density of plates or films. Being provided with a large door at the side or at the back, the lantern can be made to yield sufficient white light for the examination of fixed plates, films or prints.

The Photographer's Americanism

THE American photographer owes it to his country to patronize American products, whenever possible. The more American industrial products are consumed, the better for the country's prosperity and fame. Competition is the life of trade, and, product for product, the better one should be given the preference, regardless of the source of manufacture. If the foreign is no better than the domestic, the latter should be chosen by the consumer who is loyal to his country's interests. In cameras, lenses, dryplates and photo-chemicals, America holds her own. When an English photo-specialty fails—as is frequently the case—the American equivalent will be found to work successfully. If the German product be superior to either the English or the American, then the German should have the call. But, in any case, the American product should be given a fair trial before the consumer decides in favor of the foreign. In the face of actual superiority, sentiment should be ignored. This is demonstrated convincingly by the Japanese in California, who threaten greatly to outnumber the Americans—a circumstance causing much apprehension. By reason of their remarkable industry, neatness and thrift, these people are the most productive farmers in the "Golden State." Despite the existing strong prejudice against them, their fruits and vegetables are the most sumptuous and the most enticing—hence preferred to all others.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.
Second Prize: Value \$5.00.
Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.**

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Speed-Pictures Competition Closed June 30, 1920

First Prize: Suisai Itow.
Second Prize: Morris Fineberg.
Third Prize: Harry A. Erickson.

Honorable Mention: Stanley Clisby Arthur, F. D. Burt, J. E. Bush, J. E. Carson, F. H. Chant, H. P. Dahlen, George M. Gerhard, Herbert J. Harper, G. H. McKelway, Arthur C. Miller, George S. Nalle, Ozan K. Nunome, Gustav C. Rickarby, John T. Roberts, H. B. Rudolph, Kenneth D. Smith, Joseph Coburn Smith, C. B. Weed, F. W. G. Moebus, F. H. Rodgers, Leonard C. Lee, Clyde L. Williamson.

Subjects for Competition—1920

"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

1921

"Winter-Sports." Closes January 31.
"Home-Portraits." Closes February 28.
"Copying Works of Art." Closes March 31.
(Paintings and Statuary.)
"Home-Scenes" (Interior). Closes April 30.
"Street-Scenes." Closes May 31.
"Summer-Sports." Closes June 30.
"Summer-Flowers." Closes July 31.
"Shore-Scenes." Closes August 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.



SPEED-DEMONS

FIRST PRIZE—"SPEED-PICTURES"

SUISAI ITOW

"My Photographer"

"ALL right, I'll go to my banker to-morrow and arrange it."

"My haberdasher has a brand-new idea in scarfs—cheap, too."

"I got these at my tobacconist's—best I ever smoked for the price."

"My repairman says that the Umpty-um plug isn't any good in my car, so I gave them up for the B'Jones brand."

"I couldn't get 'Oh, By Jingo' to-day, but my music-dealer said he'd have it for me."

You can hear those or similar remarks by every one. Every one has a dealer of some sort whom he calls "my." The dealer is "his" because he deals there, and he deals there, apparently, because the dealer is "my" dealer.

Any maker of pictures who can get his name into a man's mind coupled with the possessive "my" need never worry who is going to make the man's next picture—no, nor his wife's picture, nor the pictures of his children.

How do people get to be "my" tradesmen? How does a professional man become "my" dentist, lawyer, doctor, architect, portrait-maker?

It would seem wise to investigate and copy some of the methods; for this being "my" to any one, is the gold of business, the precious stones of profits and the frankincense and myrrh of progress.

I ask myself why "my" haberdasher is "mine" and why the fellow across the street and around the corner isn't? Why do I, who write these lines, always

go to one particular shop to buy my shirts, collars, neckties, etc., and pay little if any attention to the advertisements of the other, probably as good haberdashers, who endeavor to compete with "my" man for my business?

First, because he is convenient, I suppose—close to my office. At any rate, when I first went to him, years ago, that was the reason. But habit could be broken and inconvenience of travel suffered without a pang if there were not some stronger hold. In analyzing, I find that he saves me trouble. I can 'phone him "send me a dozen collars," and he sends them, invariably, without fail, and never asks me what size or style or price. It's all down in his little book, somewhere, and when I get home, there are my collars. If I have a hurried trip to make away and want a couple of new ties, I don't have to go and select them—he knows about what I want, and a 'phone call brings a dozen of my kind, price and range of color, to my door to select from. I don't have to have the money—my credit is good and he makes no mistakes and sends no bills along.

If I go into his shop, every salesman knows me by name, and none of them wastes any time trying to show me thirty-nine dollar silk-shirts when I ask for a shirt in which to play tennis. In other words, "my" haberdasher has studied my convenience, my taste and my desires, saves me trouble, give me service and invariably I find his goods up to standard.

"My" music-dealer never tries to persuade me to buy a record. He lets me hear what he thinks I will like. His whole idea is to get into my machine and my home the records which I will want to keep. If



SAFE AT THIRD!

MORRIS FINEBERG

SECOND PRIZE — "SPEED-PICTURES"

he telephones me that he has something extra fine which he thinks I will like, I know he really has—I never find that he is overbought on something poor which he is trying to "ring off" on me. He gives me, in other words, real service, and has persuaded me that I am to him not an "easy mark," but a good customer worth pleasing.

"My" repairman will let me leave my car with him when I go out of town, drive me to the station in it, and have it waiting at the station for me when I return if I wire him. There may be a charge for the service of a driver concealed in the bill—I never asked. But his bills are always itemized for time and material, and I never find more time than is reasonable for the job. When he promises me the old boat at ten minutes past ten on next Tuesday, then and on the dot it is ready. In other words, he makes no promises he cannot keep, charges an honest price and makes it easy for me to have him "my" repairman by catering to my comfort.

"My" tobacconist knows my name and address. I don't have to ask him for my brand of coffin-nails—they are on the counter by the time I get to it from the door. There is a box of matches there with them, in case I want to buy it. If I phone him to send a box of cigars to Jim Smith, he doesn't ask me to name the brand and the color and the price—he asks me the quantity and names three prices for the quantity I want, and doesn't argue about it. He writes my card for me, and I have nothing to do but pay the bill when it comes.

Are there not evident and underlying principles here? All these men, who have become "my" servitors in

their lines, have wormed themselves into my confidence and affections by a policy of service, of saving me trouble, of giving me honest goods at honest prices, of making me certain that they are dependable. And to make the other side of the shield tell the same story I changed "my" hatter recently because, after many years of satisfaction, he overbought himself and really tried to unload a hat on me that I didn't want, that wasn't becoming and that I didn't like. I hadn't time to bother with him and left him arguing. He lost first, a sale and, second, a permanent customer by putting the temporary profit against the one thing of mine he owned and which would have served him the rest of his life—my confidence.

The best of goods, a real study of the customer's convenience, a genuine attempt to serve—these are the things which make "my" come before your name. No other process will do it, and no other word will so draw custom to you, Mr. Studio Photographer, as getting people to think and speak of you as "my" photographer.

Mull it over awhile—it is food for thought and a suggestion for a mechanism for more business.

C. H. CLAUDY, in *Bulletin of Photography*.

There are Streets—and Streets

EDITH—"Dick, dear, your office is in State Street, isn't it?"

DICKEY—"Yes, dear."

EDITH—"That's what I told papa. He made such a funny mistake about you yesterday. He said he'd been looking you up in Bradstreet."—*Exchange*.



POLO AT CORONADO

HARRY A. ERICKSON

THIRD PRIZE — "SPEED-PICTURES"

The Moon Again

ATTENTION has been invited, in this column, to the erroneous manner in representing the moon, when introducing it into a landscape or marine photograph, either by double printing or by drawing it on the original negative. In this connection, examples were given of pictures by professional artists, including even so famous an illustrator as Gustave Doré, showing the waning moon in the evening, in the low western sky, and other similar incongruities.

Now comes the revival—in the form of an editorial answer by a Boston newspaper, to a question from a correspondent—of the old fallacy that the moon's phases are due to the earth's shadow falling upon our satellite. As many photographers are, no doubt, interested in astronomy—particularly in the moon—the following easy and instructive experiment is suggested. Take a large globe, covered temporarily with white paper, and suspend it on a line with a powerful, unprotected electric light placed at any convenient distance. If you stand directly between the globe and the light, without obscuring the latter, and look at the globe from this point, you will see it as a fully illuminated disc, similar to the full moon. Moving, now, to one side, you will begin to see less of the lighted side of the globe and something of the shadow-side. When opposite a point at right angles to a line drawn from the globe to the light-source, the observer will behold exactly one-half of the bright portion of the globe. Moving still farther away from the source of light, he will see progressively more of the shaded side and less of the illuminated side of the object under observation—just as in the case of the lunar planet. Increasing still farther the distance from the light-source, but moving in a direction parallel with the line of the globe and the light, he will at last see what corresponds to the crescent, or the

minimum illuminated portion of the moon. The spectacle, in these circumstances, corresponds to the first glimpse of the new crescent moon in the western sky, or the phase of the waning moon immediately preceding the new moon—according to the side of the globe on which the observer is standing. Retracing one's steps from the point at which the globe appears completely in shadow, the experience which I have just recounted is exactly reversed, reproducing that of the person who watches the progress of the waxing crescent moon, night after night, until the lunar planet rises from the depths of the eastern sky in its entire fullness. The completely illuminated globe now corresponds again to the aspect of the full moon.

W. A. F.

Gas-Heaters in Photo-Studios

A SAD accident, which recently cost the life of a young amateur-photographer, through the use of a gas-stove, in the process of heating a sepia-toning bath—due to a sudden gust of wind, which caused the flame to set fire to her clothing—should serve as a warning to other photographic workers. It is always dangerous to use a flame of any sort for heating- or drying-purposes in a photo-studio, during the summer-time, when the doors and windows are necessarily open. In such circumstances, there is constant danger of a draft that may easily drive the flame of a gas-heater or an alcohol-lamp in any direction. If, at that time, the worker (a lady) should be standing close to the source of heat, an accident of a serious nature is very likely to occur.

This reminds us to suggest the use of an *electric* heater, which can be so regulated as to admit just the amount of heat desired. Moreover, there is under these conditions no danger of ignition.



SUBJECT FOR NEXT COMPETITION
ADVANCED WORKERS



THE PORTALS AT SUNSET

MRS. C. B. FLETCHER

**Advanced Competition—Architectural
Subjects**

Closes October 31, 1920

WE believe that those camerists who have been doing their best to make acceptable speed-pictures, outdoor-genres, rural-scenes, nature-studies and twilight-pictures will welcome a competition that has for its subject one that does not run, fly or swim away to the consternation and disappointment of the ambitious worker. Buildings do not run away, nor do they become restive. There is much satisfaction to be able to take as long as one wishes to focus and compose a picture. However, because buildings make less active subjects, is no reason why architectural photography does not demand consummate skill. In all photography there is no subject that requires such attention to light and shade, to point of view and to treatment. Moreover, there is a certain amount of responsibility associated with architectural photography in the sense that the camerist is endeavoring

to perpetuate pictorially some of the highest intellectual and beautiful expressions of the architect. A beautiful building—and there are many in every city and town—is as much a work of art as a beautiful painting or photograph; and, when the worker attempts to photograph such a building, let him not forget to retain every line as the architect intended it should be—otherwise, the picture will become but a record-photograph.

In this competition, photographs of domestic, church, commercial and government-buildings are acceptable. The purpose is to have workers confine themselves to subjects that represent architecture. An old farmhouse may prove to be an excellent example of Colonial architecture and thus would be welcome to the jury. Buildings in towns and villages are as promising subjects as those in large cities. A Colonial town-hall or a library in a New England village may be made as picturesque as an old Spanish monastery in California. The tremendous sky-scrapers of New York City are a constant invitation, by day and by night, to the intelligent worker. My object in mentioning these

subjects indiscriminately is to convey the idea that any building that possesses pronounced architectural interest and beauty, is a suitable subject for this competition. The point to remember is, to select some bit of architecture that makes a strong appeal and to photograph that in preference to another bit that is apparently lifeless and cold.

One of the most important preliminary steps in the photography of all architectural subjects is a thorough study of every possible point of view. There will always be one point from which the best result may be obtained. As soon as this has been determined, a careful study of light and shade should be made. After many unsuccessful attempts "to get things just right," the camerist may find that by night his subject becomes alive with the very effect that he cannot obtain by daylight. Often an artfully concealed street-lamp works wonders. In some cases, light from within the building enables the camerist to obtain the desired effect. Whenever possible, it is well to make the picture tell a story. Moreover, the worker who can get away from a purely commercial reproduction is to be praised. Of course, many subjects are without even the semblance of a story; but there are likewise many that combine architectural beauty with artistic and spiritual feeling. There is an old adage that is particularly applicable to architectural photography, "Do not bite off more than you can chew." If a beautiful façade is preferable to the picture of an entire building—photograph the façade and let another camerist attempt the entire building. There are many buildings that are so situated that it is virtually impossible to include their entire length or breadth on the plate or film. Even by using a wide-angle lens, the desired result is not to be obtained. In such cases, the intelligent worker will confine himself to a part of the building that will lend itself to the best advantage. Incidentally, it is interesting to note that architects of international reputation are using the camera more and more to aid their work and to record their own technical and artistic development.

Nothing in architecture is more beautiful than a high tower, either standing alone or as part of a building. At the same time, there are few more difficult subjects to photograph. Unless the camera is equipped with a rising-and-falling front, or a swing-back, it may be well to seek other subjects, for a tower that is not plumb, or one that is distorted, will be rejected at once by the jury. In some cases, the camerist may be fortunate enough to obtain the desired result at some distance from the subject by using the single combination of his lens or by using a telephoto-attachment. The worker should always remember that the plate or film must be absolutely parallel to the upright lines of the building to be photographed, otherwise the subject will appear larger at the top or bottom or vice versa according to the direction of the camera, upward or downward. Attention to this is advisable also when photographing from a housetop or a window. The use of wide-angle lenses is often necessary, although their use should be curtailed as much as possible in order to avoid distorted perspective. It is preferable to get far enough away to make the use of a wide-angle lens unnecessary. True enough, this is not always possible. However, it may be seen readily that architectural photography involves much technical and artistic skill; and that personal initiative is no small factor to obtain successful results. Of course, there are difficulties such as traffic, waving trees or plants and the ever-present small boy; yet, in the main, the camerist has an easier time of it along the lines of work that are usually difficult.

Perhaps in no branch of photography is the question of exposure of more vital importance than it is with regard to making pictures of buildings. Experienced workers know that a white marble building requires less exposure than one made of red sandstone even though both buildings are lighted by bright sunlight. Likewise, it should be remembered that deep shadows underneath porticos and doorways require more exposure despite the fact that the sun may be shining brightly outside. The old maxim to expose for the shadows is very much in force with regard to architectural photography. In all cases, careful attention should be given to the material of which a building is constructed, particularly with regard to the color of the entrances, façades, porticos and other parts of the building that differ in color from the main building. Since colors may be photographed to greater or lesser advantage, it may be seen that a white building with green trimmings would require different treatment from a red building with white trimmings. These little points may appear to be superfluous; but successful architectural photography takes these very details into strict account. Needless to say, a reliable exposure-meter, ray-screen, tripod and orthochromatic plates and films are essential to success. Of course, excellent photographs are made without these accessories; but the chances of success are better if the camerist is equipped properly. Several manufacturers of standard ray-screens issue booklets that are very illuminating with regard to the successful use of ray-screens and orthochromatic plates and films. It will be well worth the time to read one of these booklets before making a picture of any building that possesses unusual decorative colorings.

Let me again call attention to the educational value of architectural photography. The worker is virtually compelled to assimilate historical or other information of value. It does not seem conceivable that a camerist would photograph a beautiful public building without enquiring a little into its history. For this reason alone the present competition may be used to great advantage by amateur and professional photographers who may wish to combine the study of history and the mastery of architectural photography. This suggestion was accepted last year by several workers very much to their pleasure and advantage. In fact, one camerist used the pictures and information obtained for an article that brought him a handsome financial return. It is of distinct advantage for the worker to own one good textbook on architecture and those who do not care to own one can obtain many excellent books at the public libraries. In short, the greater *real interest* the camerist shows the better pictures he will make and enjoy photography the more.

This is the third competition devoted to architectural subjects that has appeared in several years and it would seem that many camerists should have excellent material to submit to the consideration of the judges. The thousands of beautiful private and public buildings in all parts of this country should offer inducements enough to cause the camerist to put forth his best effort to reproduce them to advantage. The mere fact that buildings are stationary enables the photographer to work to better advantage and often with greater credit to himself. Of course, architectural photography embodies certain difficulties to be met with in no other branch of photography. On the other hand, it has rewards that are worth striving for and that have a value of their own in the eyes of those who know good work.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two years' practical camera-activity*, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of *stiff corrugated board*—not the flexible kind, or with thin wood-veneer. Large packages may be sent by express.

Awards—Beginners' Competition

Closed June 30, 1920

First Prize: Harold B. Neal.

Second Prize: R. H. Addison.

Honorable Mention: James A. Dooley; George F. Hogan; R. V. Koontz; Mrs. W. L. Loyd.

The Care of Developed Plates, Films and Prints

ONE of the things that have impressed me of late is the inconsistency shown by some beginners. They will go to considerable expense and effort to obtain a camera-equipment, they will plan a trip carefully with regard to photographic possibilities and will bend every energy to obtain the best possible results artistically and technically. However, when the desired picture is made and the commendation of friends has been received, many beginners appear to lose interest in the developed plate, film and print. Soon, the plate may become broken, and the film lost—all because the beginner fails to maintain his interest in the picture that he has worked hard to obtain. Some philosopher, I believe, has ventured the statement that when a man has succeeded in attaining the object of his desires, he often loses interest and is apt to cast aside the very thing that may have cost him much mental and physical effort to make his own. Whatever of truth there may be in this interpretation of human nature, the fact remains that many beginners seem to give their developed plates, films and prints little consideration.

Not very long ago, I chanced to meet a gentleman who was an enthusiastic amateur photographer of several years' experience. His pictures were charming and I praised them highly for they deserved it. I selected one print that appealed to me especially and asked that I might have the negative for a few days in order to make an enlargement. My interest in his picture seemed to please the gentleman and he invited me up to his room while he looked for the negative. Naturally, I assumed that he would pick up a box or envelope and in a few moments put his hand on the right negative. Not so, however. I waited nearly an hour, and at the conclusion of that time he was still looking! In "pawing" around for the missing plate, my acquaintance must have scratched several negatives that deserved a better fate at his hands. In short, by his carelessness and neglect, this amateur was in a fair way to undo all the really fine photographic work that he was well fitted to do.

Although the beginner who packs his plates and films away in boxes or stout envelopes is to be commended, let me say that in the mountains or at the seashore this precaution is not always enough. Dampness is an evil that the camerist is forced to contend with at every hand; and, no matter how thick the box or envelope may be, moisture will creep in slowly. One of the most practical and simple protective measures that I have seen used is a tin cake-box or bread-box. When purchasing such a box, the beginner will do well to select one that has a tight cover. In most cases, a cake-box will be found large enough to hold all necessary plates, films and prints that have been



RHODODENDRON LODGE

HAROLD B. NEAL

FIRST PRIZE — BEGINNERS' COMPETITION

developed and also those that are still to be exposed. A good negative or print is always worth preservation, especially in these days of high prices and limited output; and it should be the camerist's first thought after the pleasure of achievement is past.

Perhaps, even more important than the care of plates, films and prints, during vacation-days, is their preservation after the return home. Despite all that may be said against the methodical cataloging and arranging of negatives and prints, the fact remains that it is the *one method* that will enable the beginner to find a negative or print without a tremendous loss of nervous energy and time. There are systems galore that are excellent; but each is suited to a special need of the individual and one system will not serve all requirements. The beginner will do well to devise one of his own that may be based on those already in practical use. Probably, the simplest and most satisfactory system for the average beginner is the one which makes use of the standard negative boxes and albums now on the market. These containers will hold a certain number of glass or film-negatives, have an index, are well made, and are a positive protection, if the thin paper used is chemically pure. Let us suppose that I have made a trip through the Grand Canyon of Arizona and have three hundred film-negatives that I wish to keep safely and in order. My first step would be to purchase, from a reliable dealer, three negative-albums, each one holding one hundred negatives. My second step would be to select some Sunday or holiday when the weather precluded outdoor-activities—and the interruptions of callers—and devote my entire attention to arranging my negatives in consecutive order in strict accordance with the itinerary of my trip. The third—and last—step would be to make sure that each negative was placed in the correct "pocket" of the album and that the index coincided absolutely. Then, with all three albums filled, I would make a

little typewritten label for the back of each album, thus: "Grand Canyon Trip, August 10, 1920, Album 1, Negatives 1-100" (or 101-200, 201-300). By this simple procedure, it is an easy matter to find a negative of a particular subject ten years hence or to-morrow morning. The negative-boxes for glass-plates may be arranged in a similar manner and just as easily. As I have said already, there are many systems and some are as complex as the filing-system of a large corporation; but the beginner will find that the simpler he makes whatever system he may devise, the less likely he will be to give it up as "too much bother."

Last winter, I called on a friend who is an excellent photographer. In the course of the evening, we discussed the pictorial possibilities of the Maine coast. In the desire to convince me of the beauties of that part of our country, he went upstairs to get his pictures. To my amazement, he kept his beautiful pictures in a large hat-box! My friend laughed at my dismay and said, "I get more pleasure out of making the exposure, developing the exposed plate and printing the picture than I do in showing people the results." Nevertheless, I maintain that my friend owes it to himself and to photography to care for his beautiful prints; for he and his pictures are an inspiration to every camerist who makes the most of photography.

The familiar photo-album is without a doubt the best means to care for collections of prints; and I advise every beginner to form the habit of mounting his pictures as soon as possible in stout, chemically pure albums. Prints should be mounted systematically and with due regard for sequence of events; otherwise, the album will fail of its purpose to be a pictorial record. I admit that to mount fifty or one hundred pictures is somewhat of a task; but if each dozen or so are mounted as they come along, the undertaking is not so burdensome, after all.

A. H. B.



A MARCH-MORNING

R. H. ADDISON

SECOND PRIZE — BEGINNERS' COMPETITION

Autochrome-Work in Tropical Africa

ALTHOUGH the information contained in the following article by Guiliam de Vies in *The Amateur Photographer* was written for the benefit of photographers in South Africa, there is much helpful advice of interest to users of autochromes in any tropical climate.

"Between latitudes 10° and 20° the difficulties in the way of the color-photographer are like locusts—one cannot see them for the multitude of them. With the thermometer at 102° in the shade at eight o'clock in the morning, the prospect of getting successful autochromes might very well seem to be remote; and, when I confess that my first attempts resulted in bad frilling, I know I shall have the sympathy of more fortunately placed photographers.

"Then there are the rapid changes of temperature during a thunderstorm, which will break with startling suddenness on a seemingly lovely day. Woe betide the poor amateur busy with plates, films, or papers when the thunder comes. I have had a batch of 400 printing-out-paper prints go off like milk or meat. Alum of formalin has to be used at once and all further operations stopped. The water supply again may be enriched with tadpoles and mosquito larvæ, with, perhaps, no better strainer available than a handkerchief. Moreover, the climatic conditions with which we have to contend out here are such that when once a box of autochrome plates has been opened, they must be used within forty-eight hours, or they are done for. Nevertheless, by working in the way described, and by exercising due care from beginning to end, I have been successful.

"The greatest difficulty of all lies in development. My first attempts were made with iced solutions: each dish or bottle was kept on ice, and definite weights of ice were added to the developer, reverser, and re-developer. This works well enough, but ice is not always obtainable. A refrigerating-machine does not exist at, let us say, B'wana M'Kubwa, though I found an ample supply at the Victoria Falls.

"As far as practical work is concerned, development should, if possible, be arranged for the evening. Three or four bottles are filled with water and wrapped in wet

cloths some two hours before commencing operations: this lowers the temperature. All the solutions are to be made up from these, which will also supply the water for washing.

"As a preliminary, the plate is placed in a 1 in 40 formalin-bath, rinsed for ten seconds in a couple of changes of water, and placed in the following developer, which I have found best. It will be seen that alternatives are provided in the case of sodium sulphite and of liquor ammonia.

Pyro.....	4 grains
Potassium bromide.....	4 "
Sodium sulphite (anh.).....	20 "
or (cryst.).....	40 "
Sodium bisulphite solution (1 in 40)....	2 drops
Liq. amm. fort.....	30 minims
or, better, Liq. amm. B.P.....	1½ drams
Water.....	2 ounces

"Development is carried on for three minutes in this, the plate is rinsed for a couple of seconds, and the reversing-bath is poured over it. This is the source of failure with many workers out here: the reverser is mixed, kept corked up for weeks before use, and when used is generally decomposed owing to organic matter in the water. It is much better to make up, just before use, a reversing-bath of

Potassium permanganate.....	2 grains
Water.....	2½ ounces
Sulphuric acid dilute B.P.....	140 minims

"If the dilute acid is not available, one part of strong acid may be poured into twelve parts of water, and used when cold.

"Three minutes in the reverser is sufficient, then a rinse, and the plate is redeveloped in

Sodium sulphite (anh.).....	13 grains
Amidol.....	5 "
Water.....	1 ounce

"A quick rinse after this, followed by a run through a weak bath of reverser—½ dram of the solution just named to 3½ ounces of water—another half-minute wash, and the autochrome is finished.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Hurter and Driffield

IN a timely article in *The Amateur Photographer*, R. Child Bayley discusses the well-known "H. and D.," method of designating the speed of plates and films. He says, "We are often asked the meaning of the initials 'H. and D.,' and those who are familiar with the achievements of the two investigators whose names we have just written, or those who read the pages of the fine memorial volume which Mr. Ferguson has edited so carefully, may well smile at the thought of attempting to summarize their work within the scope of an 'In reply' note. Fortunately, it is not necessary to know anything whatever about 'H. and D.' to profit by their labors; every photographer does that when he makes an exposure or develops a negative; just as he profits by Faraday and Stephenson when he travels by tube.

"Photography, when gelatine-dryplates first came into general use, was a case of a process in which practice had altogether outrun scientific knowledge: its wonderful results were obtained by rule-of-thumb, for which no sound theoretical explanation was forthcoming. Already Dr. Hurter as chemist and Mr. Driffield as engineer in one of the great chemical industries of the country, had become close friends; and, indeed, had been working on wet-plate photography and some of its problems; but it was by a paper read at Liverpool before the local branch of the Society of Chemical Industry, on May 31st, 1890, that the photographic world first learned how much they had done to throw light upon the dark places of photographic practice.

"In the very briefest form, it may be said that they asked themselves what is it that the photographer wishes to get when he attempts to photograph, and what kind of negative must he obtain to yield that desired result? Having answered these questions by their definition of a 'perfect negative,' they investigated the conditions of emulsion, exposure, and development by which that negative could be made. Their methods, and the appliances which they devised to carry them out, put an altogether new power into the hands of those concerned with the manufacture of emulsions. The value of their photometer for density-measurements has been compared, not unduly, with that of the thermometer to measure temperatures or with the balance for weighing.

"A single instance may give some idea of this. A leading manufacturer has since declared that he made and sold, and the photographic public bought and appreciated, certain plates as specially rapid which were actually no faster at all than his slow plates—only foggier. It was the 'H. and D. system,' to use a general term, which first made it possible to differentiate clearly between deposit due to light-action in the camera, and deposit which we now know to be merely 'chemical fog.'

"The photographer has benefited by their labors, in that he can now buy plates and films, far more sensitive and far finer in quality, than the old rule-of-thumb processes of manufacture gave or could ever have given him. He has also learned that without correct exposure, even only a moderately truthful rendering of the tones of his subject is impossible; and he has had

brought home to him the futility of many of the tricks with which he used to cumber his operations in development. In last respect *Photography* for many years fought an uphill battle to obtain the general application of the knowledge furnished by Hurter and Driffield to darkroom-operations.

"And these great benefits, let us never forget, were given freely to all who cared to avail themselves of them. One or two appliances of limited scope were patented by their inventors; but, broadly speaking, all the most valuable results of years of prolonged, skilful, and painstaking experiments, were given unreservedly to their fellow photographers."

Exhausted Solutions

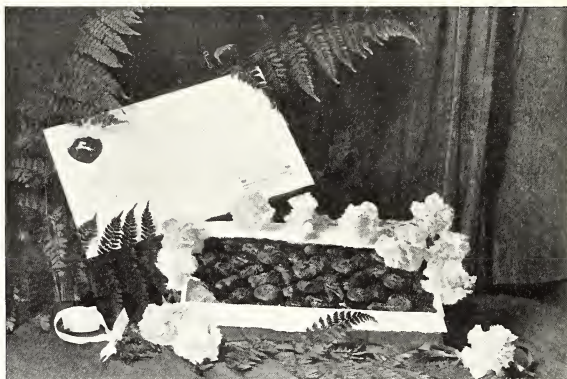
IT is not always recognized that it is false economy to overwork solutions, such as developing- and fixing-baths, whereby indifferent work is turned out to the general detriment of business, says the editor of *The British Journal*. Taking the case of bromide-printing, it is quite a common practice to continue to use the developer, as long as there is sufficient to cover the prints, with the result that the later copies lack strength and are poor in color, besides being quite unfit for toning. Added to this, we often find the fixing-bath overworked in the same manner, so that, after a comparatively short time, the highlights or margins assume a dingy tint. If such prints are toned, the chances are that there are no pure whites, these being tinged to a pale brown. In order to avoid overworking the developer, it is a good plan to compare one of the earlier prints of a batch with later ones, from time to time, in *daylight* or as white an artificial light as possible, any change in color being readily visible. The fixing-bath can be tested by noting the time taken to fix a slip of undeveloped plate and comparing it with that needed in a fresh solution. "Moves" and fogged plates may be usefully employed in this way.

Scratched Glass

IN a transatlantic cotemporary we note a little dodge which may be of value to those who have scratched plate glass in showcase or window. It is the application of what was once known as "encaustic paste" to the surface after well cleaning. This fills the scratches and renders them less conspicuous. The compound, which was formerly used to cover up spotting marks on glazed prints, is composed of an ounce of white wax dissolved in a pint of spirit of turpentine. A little of this is spread over the glass with a tuft of cotton-wool and then polished off as completely as possible. This paste is useful also for treating celluloid films which have become scratched on front or back, and is used by some photographers to give a semi-gloss to platinotype or bromide prints. It certainly produces a much improved effect upon a dull-mat bromide with heavy opaque shadows. In all its applications, the action is the same: by filling up minute crevices the reflection of scattered light is prevented.—*British Journal*.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE. The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

It seems to me that the chief fault in the composition is the big, black boulder in front. It does not add to the beauty of the scene, but seems to be simply an obstruction—completely concealing the fore- and middle-ground, which should be strongly in evidence to carry out the idea conveyed by the title. The distant hills are in sharp focus, as they *must* be, if the scene is to be represented to show the beauty of it as it appears to the normal eye, on a clear day. From where the camerist stood, when making this on a bright, clear day, I can hardly believe that the big rock and tree appeared to him quite so black and lacking in detail as they appear in the picture. I note this, as it seems to me to be a fault in most pictures of this kind, where there are very near objects, and in all photographs of this kind which I make; but I am not satisfied with it. (I enclose the illustration of the "Black Canyon" with the large boulder blotted out, clipped from a duplicate copy of July PHOTO-ERA.)

WILLIAM H. BLACAR.



No photograph can portray adequately the beauty of the landscape, spread out to the gaze of the camera-enthusiast when he made this picture, on that day in August. Very many of us never have had, and never will have, the opportunity to visit such a spot; therefore we appreciate such pictures as this all the more, even though they may not be perfect in regard to com-

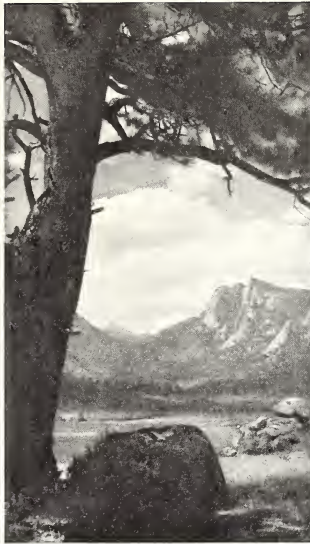
position and technique. The photographer had the right idea and an eye for the beautiful; but there may be some points, as in nearly every photograph, wherein some improvement might be made. The large stone in the exact center of the immediate foreground is poorly placed—blocking the entrance to an otherwise charming "Vista" effect. Possibly, it might be better, were the picture oblong instead of upright, by trimming the print so that the rock would have been less conspicuous, provided it were desirable to retain both tree and rock. Otherwise, a slight change in viewpoint might have been desirable. The negative seems to have been somewhat underexposed, there being little detail in either tree or rock. The "Harvey" meter gives 4 seconds for an exposure under similar conditions, and even 5 seconds would not seem to be too long to take care of the detail in the near foreground.

GEO. REED STEVENS.



At my first glance at this print, my eye was deceived by its fine pictorial, technical and tonal qualities. A closer study revealed the fact that there was something the matter, and I am led to believe that a blocked entrance is the trouble. The eye has to travel half way up the right edge before it can effect an entrance, and then follows the contour of the mountains, the trunk of the tree, along the drooping limb, and out of the picture only a short distance from the entrance—lack of entrance and exit. The planes are well defined. The distant focusing, perhaps, is more beneficial than harmful in this instance. Nevertheless, the print shows the ear-marks of an artist.

J. E. CARSON.



THE PICTURE CRITICIZED THIS MONTH

WITH such a well-balanced ideal mountain-range composition and cloud-effect, I think it a mistake to include the tree. Here are miles and miles of the most beautiful scenery to portray, without crowding in another subject, which would make a study by itself. By stepping back a few feet, it would bring the tree into the print, reducing the size of the foreground-rock, and making a better connecting line of rocks to the right, hence to the horizon. By using a little larger diaphragm-opening, it would have given a better atmospheric effect of the upper mountain-range, without sacrificing this beautiful cloud-effect. The upper right foliage of the tree appears to have been unsuccessfully worked and is an eye-sore to the print. It could be improved by skilfully working in the outline of the mountain, and reducing the diameter of the tree on the left.

JOHN SCHOCK.



THE picture is a very fine one, indeed. It would be difficult to improve it substantially, and, at the same time, present the same pleasing effect. I think the arrangement of distance and middle distance, together with suggestion of atmosphere, is excellent. The sky-rendering is about as it should be for such a view. What may be a slight imperfection appears in the upper part. It might be advantageous to trim about one-half inch from foliage at top, and just a shade more exposure would enhance the appearance of tree-

trunk and rock in foreground. But these may look much better in the original than in reproduction.

LYNDSAY BOURKE.



A VERY pretty bit of mountain-landscape. It shows slight underexposure in the foreground, for the rock and tree-trunk are too dense in the shadow. Slightly top-heavy, which could be remedied by trimming, to include the lower branch, with a clear margin; and the aerial perspective might be slightly improved. Otherwise, the picture presents a very successful mountain-landscape.

OLIVER FRANTZ.



UPON looking at the reproduction of the print, I am subtly reminded of the work of the most modern scenic artists. This little panel with its tapestry-like effect, is most attractively presented. Worked out in hazy, harmonious hues, it would be more than charming. The rock in the foreground is a trifle too large and too high—but, one must simply peer over it into the delightful vista beyond and enjoy it. The general tone and the highlights on the hills lend a certain warmth and atmosphere to the picture that stamp it as the work of a person with decidedly artistic feeling.

F. LANDRY BERTHOUD.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



ALTHOUGH the work of the photo-technical expert excels in the accurate representation of visual truth, it is sometimes enhanced by the marks of a true artist such as beautiful light and shade (*chiaroscuro*), harmony of parts or masses, and best point of view. These qualities eminently distinguish the productions of that successful photographic specialist, Harry Coutant, of New York, who has favored PHOTO-ERA with an instructive account of his professional activity. To a craftsman of his rare ability, the designation of "commercial photographer" is distasteful; for by that term we generally identify an all-around photographer who produces good technical records without any attempt to add the artistic element. So long as this class of routine work is acceptable, why worry about a beautifully lighted and artistically presented interior? The reader need but glance at any of the eleven pictures by Mr. Coutant, in this issue, to be convinced of the photographer's striking technical and artistic equipment, which has proved to be the foundation of his enviable success and reputation. When called upon to photograph an estate in its various aspects, Mr. Coutant is given a *carte blanche* order by the owner, who believes—if he is not convinced—that Mr. Coutant can be trusted to exhaust the artistic possibilities of the place. Of his technical skill, there is, of course, no doubt. This is illustrated by the gate-lodge—a feature of an estate belonging to a wealthy New Yorker. What could be more pleasingly impressive than the "Fountain,"—the initial illustration and the frontispiece of this issue? Note the superb perspective in the Hartford National Bank, with one of the tables supplying the necessary balance! This important feature—in the form of a pillar—is observed in the picture on page 113; whereas the pictorial instinct of the artist is expressed in an eminent degree in an episode of Mayor Mitchell's funeral, page 114. A delightfully artistic note in the composition, "Garden Pergola," page 117, is the light-and-shade effect on the floor, which affords variety and balance to a complete picture. Novelty of interest—a source of undoubted satisfaction to the client—marks the doorway, page 116. The doorway with the family's coat-of-arms, the portrait of a household pet, and the idea of a guardian of the premises, form a picture of more than ordinary interest. These eleven subjects are only a few of a large and varied collection of prints submitted to the Editor, who regrets that it could not be published here in its entirety. Data:

"The Fountain"—frontispiece; September, 1911, Plagiatum lens, double-coated plate (Seed L-Ortho); Edinol developer; "I made it again, last summer, on a 5 x 7 plate, with a Tessar F/6.3 lens, F/11, 1/5 second, on an Orthonon plate, and did not get a negative anywhere approaching in values the one made in 1911 on an 8 x 10 plate, which is used here. Why? I don't know. I have a special fondness for that old Plagiatum lens. When it was first brought out, B. and L. offered a series of prizes for the best photograph made with it, and I got the first prize. Perhaps that is the reason that I consider the first negative so much better than the other. I wonder." (Harry Coutant.)

"Gate-Lodge"—page 110; June, 1919; Tessar F/6.3; 5 x 7 Orthonon; glycin; enlarged with Spencer Port-land lens to 10 x 14.

"Hartford National Bank"—page 111; Orthonon plate; 8¼-inch, series V, Protar; at F/4.5; 10 minutes' exposure. Donn Barber, architect.

"Residence"—page 112; made in 1916; 11 x 14 plate (Orthonon); glycin; Tessar F/6.3; Azo glossy, for reproduction. Is the Wm. Fahnestock estate at Katenah, N.Y. Chas. A. Platt, architect.

"Inner Court"—page 113; 4A Kodak, on Eastman film; probably 1/25 second; developed in tank with Edinol.

"Mayor Mitchell's Funeral"—page 114; Seed Graflex plate; 5 x 7 Graflex with B. and L. Tessar F/4.5; from a second-story window; 1/300 second; tank development with Serchol as per their formula.

"Little Collie Pup"—page 114; made with the first Graflex built—about 20 years ago; data not remembered by Mr. Coutant.

"Copy of Painting by Botticelli"—page 115; made about 1905. "I cannot give very accurate data, not remembering the colors of the painting; undoubtedly Seed non-halation plate, with an old Seed color-screen; probably developed with our old and tried friend pyro. I do not remember the length of exposure. Some of these old paintings used to require exposures running into hours. Now, I usually use a Seed L-Ortho non-halation plate, with color-screens running from three to fifteen times—depending on the colors in the painting to be brought to a point of separation where they can be printed. The lens is immaterial, so long as it will cover the plate used, as it is a question of time of exposure. I have an old 15-inch Euryscope which is a favorite with me for that sort of work. I always aim to give plenty of exposure, with a slow development with Edinol." (Harry Coutant.)

"Doorway with Collie-Dog"—page 116; made in 1916; 11 x 14 Seed 30, with Tessar F/6.3 lens, late afternoon, December; considerably underexposed, but fairly good print obtained on contrasty paper. On account of dog, only 1/100 second.

"Garden Pergola"—page 117; 11 x 14 Orthonon plate; glycin; 8-inch, series V, Protar; Azo Glossy for reproduction. Lewis Colt Albro, architect.

"Henry Miller's Theatre"—page 118; 4A Kodak, 5¼-inch VIIa Protar, at F/64, probably three or four seconds; Orthonon plate; glycin; 8 x 10 enlarged on P. M. C. Glossy, for reproduction.

In his "Twilight," page 120, Mr. Pratt presents a picture of mysterious charm. It is an exceedingly beautiful composition, with the interest leading up to, and centering in, the lingering farewell to the departing day. Data: view in California; February, 6.30 P.M.; dull light; 3¼ x 4¼ reflex camera; 8-inch Struss Pictorial lens, at F/4.8; Ingento A ray-filter; 1 second; Standard Polychrome plate; Adurol in tank; print, Artura Carbon Black.

The only camera-club in Greater Boston is the one with rooms on the top (fifth) floor of the Y. M. C. U. building, 48 Boylston Street, Boston. *There is no elevator*, and members, as well as everybody else, are obliged to ascend four flights of stairs to reach the place of activity, discussion or rendez-vous. This is, indeed, a test of enthusiasm. There is generally a group of camerists in the well-equipped darkroom, in the enlarging-room, or in the library; and not the least industrious worker or sound debater is Mr. Ned Morton,

whose admirable portrait appears on page 121. Data: made in the club's studio; 5 x 7 studio-camera; 8 x 10 portrait-lens; stop, F/6; artificial light; 2 seconds; Cramer plate; M. Q.; enlarged on Royal Bromide Smooth.

As an expression of quiet dignity and contentment, "Buster," page 122, is an unqualified success. Rather, shall I say, it is an admirable portrait of a feline member of the family. The sitter certainly is well posed and lighted, and fills the picture-space excellently. Print was awarded Honorable Mention in our "Domestic Pets" competition, November, 1918. Data: June, 1918; 9.30 A.M.; in the shade; $\frac{1}{2}$ second; $3\frac{1}{4}$ x $4\frac{1}{4}$ L. F. Graflex; $8\frac{1}{4}$ -inch Euryplan lens; K2 color-screen; Standard Orthonon; pyro-acetone; Wellington Cream Crayon Bromide enlargement.

Several years ago, a group of young people ascended picturesque Mount Chocorua, not far from Conway, New Hampshire. Among the snapshots made on the summit was the portrait of a member of the party, reproduced on page 123. Charles Marvin, Jr., was the camerist—or, rather, artist, I should say. For an outdoor portrait, in strong, direct sunlight, it is eminently successful and praiseworthy. Data: August, 1 P.M.; Vest-Pocket Kodak (1 $\frac{5}{8}$ x $2\frac{1}{2}$); $3\frac{1}{2}$ -inch Meniscus lens; stop No. 2 (about F/13); bright sun; $\frac{1}{25}$ second; Eastman M. C. Film; enlargement on P. M. C.

Amateurs who are interested in novel photographic activities, will find in the card-decoration, page 124, something to please them. The idea is simple, and can be easily carried out. Mr. Babcock's arrangement displays much artistic taste and technical skill. The lighting is perfect and the chemical effect—to use a professional term—cannot be excelled. It was awarded Honorable Mention in "Decorative Applications" competition, several years ago. Data: Sept., 11 A.M.; bright light, from north window; 5 x 7 view-camera; $8\frac{1}{4}$ -inch Goerz lens; stop, F/11; 4 seconds; Cramer Medium Iso; pyro; Cyko contact-print.

"The Old Cider Mill," by the Editor, was placed on page 125 for several reasons. Being unable to obtain a picture made by Mr. Blumann's friend, the "Old Codger," he chose a print of his own, made about thirty years ago, in order to illustrate, if possible, the character of landscapes that were produced in that period. This picture of a rather attractive subject would probably not be admitted to the exhibition of a present-day photographic salon, because of its clear definition and excessive detail. But, despite its comparative shortcomings, the view may still interest a certain class of picture-lovers. All the same, the author is ready to offer his apologies to the exacting readers of his magazine. Data non-existent.

For the interesting and somewhat unusual view of Zion Canyon, page 127, we are indebted to the generosity of the well-known mountain-photographer and lecturer, Herbert W. Gleason. It was the original plan of Mr. Gleason and the Publisher to reproduce the print in that beautiful terra cotta color, so peculiar to this mountain, on the front-cover of the magazine; but, failing to obtain the necessary shade of ink, the idea was abandoned. The picture is now published in the usual way. The subject is one of several thousand Mr. Gleason has made of the American National Parks, which, made into lantern-slides and exquisitely and truthfully colored by Mrs. Gleason, are used by Mr. Gleason in his lectures. Data: September; 1 P.M.; bright but cloudy; 5 x 7 camera, fitted with $6\frac{1}{2}$ -inch Goerz lens; F/16; 3-time color-screen; $\frac{1}{4}$ second; Eastman Portrait-Film; pyro; print on P. M. C. Glossy Bromide.

The specimen plates from the popular annual,

"Pictorial Photography in America," which appeared occasionally during the current year, have their last representative in the attractive "Ruth St. Denis," page 129. This interesting publication has been so well received, that preparations for publishing its successor, for 1921, are now in progress.

The rather unusual event of a battery of Brownie cameras being trained on a helpless individual, is depicted on page 132. The occasion was during a conference of Y. M. C. A. at Camp Maqua, Portland, Maine, last June, where about two hundred girls were in attendance, and an average of seven out of every ten girls that go to these camps or conferences take hand-cameras with them. There are forty conferences during the summer with from one to five hundred girls in each, and the same average holds true in each case. Besides, there are one hundred and fifty-three camps in the United States each summer with 50,000 girls in attendance, so that there is a goodly number of Kodaks and other cameras used by the Y. M. C. A. girls every summer. Data: June, 2 P.M.; hazy light; 8 x 10 City View Camera; R. H. lens; stop, F/16; $\frac{1}{25}$ second; Standard Orthonon; pyro; Azo print.

The portrait of the apprehensive young kingfisher, page 135, was omitted (for lack of space) from Dr. Pardoe's remarkably interesting, illustrated article on nature-photography, in July PHOTO-ERA. Practical workers will appreciate the effective, dark background of which the artist availed himself.

Mr. V. Akers, a painter and artist-photographer, is extremely successful in capturing striking and beautiful effects of nature, like the one reproduced on page 136. No data; but the artist states that he uses, for his camera-work in the open, a 3A ($3\frac{1}{4}$ x $5\frac{1}{2}$) Brownie fitted with a $6\frac{1}{2}$ -inch Verito Special; Eastman N. C. film; a set of W. & W. K-1, K-2, and K-3 Color-Filters, and an old, staunch 8 x 10 camera tripod.

Advanced Workers' Competition

THE element of danger in such sports as aviation, automobile and motorcycle races and polo, is ever present, and the incident depicted by Suisai Itow, in first-prize picture, "Speed-Demons," is no exception. As Mr. Itow informs us—"I should like you please to note the wheels of the nearest machine. You see how they are skidding? Well, just a few seconds after I made the exposure, this machine skidded, broke the driver's leg, knocked me down breaking my leg and causing me twenty weeks of suffering and a month in bed. Perhaps, this may interest your readers."

A press-snapshot of the not unusual play at third base is not a rarity, although the thrilling moment will always be remembered by the baseball fans who saw it. Ordinarily, the incident is a portrayal of twisted bodies and legs and distorted features, accompanied by a cloud of dust—a not very graceful or attractive group. Seldom the opportunity occurs to enable the photographer to produce a picture of interest to the painter—because of the suddenness of the incident. In Mr. Fineberg's prize-picture, however, there are present not only the elements of originality and technical skill, but artistic grouping and pictorial interest. Mr. Fineberg, an official photographer of the *Boston Post*, has considerable artistic perception and, standing behind third base at an American League game (Boston and Athletics) instinctively saw the possibility of a strikingly artistic effect, as the base-runner (Dykes, of the Athletics) reached the "hot corner" and the Red Sox' infielder awaited the ball with outstretched hands. He quickly moved one step to

(Continued on page 159)



ON THE GROUNDGLASS

WILFRED A. FRENCH



An Interesting Portrait

THIS portrait of Charles L. Burrill—former Treasurer and Receiver General of the Commonwealth of Massachusetts, who retired under the statutory limitation of five years ending January 21, 1920—is published by courtesy of "Our Dumb Animals," where it appeared on account of the great attachment between the master and his pet. Aside from the artistic character of the picture as a home-portrait (suggestive of the XVIII century style of portraiture), the picture offers a singular effect of persistent vision.



Courtesy Our Dumb Animals

By experiment, we have found that most persons who first glance at this portrait, are puzzled by the white human profile, at the left. When told that this really represents the head of Mr. Burrill's pet-dog "Don," the beholder fails to discover it, but continues to see the human profile with flowing chin-whiskers. Those who distinguish the dog's face at the first glance, see it quickly transformed into a strange, white profile, and this impression will continue persistently. The singular effect is due to the fact that the left side of the dog's face is in complete shadow, the strongly illuminated parts asserting themselves at the expense of the rest of the animal.

Another Salesman Gone

Manager—"Thomson, you are discharged."

Clerk—"But I've done nothing, sir; absolutely nothing."

"Exactly! That's why you're discharged!"—*Globe*.

Sailing Under False Colors

THANK goodness that amateur-photography is not like yachting! The amateur photographer owns his camera, but makes his own pictures. The amateur yachtsman owns his craft, but very frequently has to hire a skipper to sail it. This does not seem like true sportsmanship; but it is legitimate and such a winner is entitled to as much glory as the true sportsman who, being the owner, is also his own skipper.

Then, too, few if any owners of race-horses drive their animal around the race-track. How would it be, if the proud owner of an elaborate camera, and albums filled with successful photographs, proved to be entirely unskilled and that he hired an expert worker impecunious and discreet—to operate his photo-equipment and produce the results of which he poses as the author? It has been done not only by motion-picture "travelogues," but by men of high social standing, and eager to shine.

Hardly Believable—but a Fact!

A FEW days ago we happened to be in a photo-supply store and, as we were about to leave, a young lady entered who seemed to be much put out about something. We lingered to see what would happen. In her hand she carried a folding Brownie. Without any preliminaries, she announced that the camera was "no good" and that she wanted her money back. The clerk asked her politely if she happened to have some pictures with her in order that he might try to discover the trouble. From her bag she produced twelve prints, each one of which showed a large, distorted face of a girl, and that was all. The clerk looked at the camera carefully, placed a piece of groundglass over the picture-area and otherwise attempted to account for the misshapen pictures. Suddenly an idea seized him. He asked the young lady to show him how she held the camera when she was making a picture. If we had not been an eye-witness, we would not have believed it; but that young lady held the camera with the lens pointed upward so that every picture that she made was of her own face!

A Fitting Simile

THE Editor entered a luncheon-place, not long ago, and wondered with how much comfort the guests consumed their luncheon, as they sat, perched on stools and packed as closely together as sardines in a box. Presently, one of the sufferers raised his arms over his head, and remarked: "Gosh! I feel just like a 4 x 5 plate in a 4 x 5 tray."

It occurred to the Editor that the uncomfortable individual must have been a camerist who had foolishly restricted the size of his trays to that of his plates and prints—with dire results—but who, acting upon PHOTO-ERA's advice, had adopted much larger-sized trays, and *seen the light*.

As the Editor once remarked to one of these foolish small-tray workers: "Why not sleep in a bed that will just fit your body; or use a bath-tub of similar dimension; or try to swim in a pool that is only as long as you are high?"



ANSWERS TO QUERIES



C. H. K.—Shutters that are out of order should be repaired by a competent camera-repair man or sent to the manufacturer. Too much emphasis cannot be placed on the advice to avoid tampering with shutters. Most of them are as delicate as a watch, and there are not many persons who would attempt to repair their own watches. If the attempt is made despite this warning, in no circumstances use oil or other lubricant, as this will result in the mechanism becoming gummed up and the accuracy of the shutter-speeds destroyed.

F. R. S.—It was Baptista Della Porta who applied the principle of the camera obscura, by covering the small hole of a small box with a single biconvex lens, and placing at the other end a translucent screen to receive the image. You state that Della Porta's experiments were made in 1859. This is a serious mistake, as the correct date is 1569.

H. L. B.—A. Horsley Hinton, who died several years ago, is the English photo-pictorialist you mean. He was the author of a large number of landscape-pieces noted for dignity and nobility of design, and breadth of treatment. He was also the author of a notable work on the art of pictorial composition, which is justly regarded as a classic in photographic literature. We have printed elsewhere in this issue, for your benefit and that of others, a chapter from his book. It will give you a good idea of his style, and of the importance of the book as a valuable, practical guide to the progressive pictorialist.

J. A. H.—To copy a soft-focus print, attach a piece of printed matter *close* to the surface of the print by means of finely pointed pins, so as to make the resulting holes almost imperceptible, and then make your copy according to this printed guide. It may be well to place one piece of printing at each side of the print so as to be sure to have the entire surface in proper focus. *Be sure* to remove the printed matter before making the exposure.

U. G. K.—To convert a photograph into a drawing is one of the simplest photographic amusements, though valuable for serious purposes. Take any kind of a mat-surface print (except a blue-print, because this is treated differently) and, with a fine, soft-writing-pen, trace carefully the outlines and such details as are desired, in India ink. After the ink has dried thoroughly, the print is then bleached in the following manner: 10% solution of iodine in methylated spirits, 60 drops; 10% solution of potassium cyanide in water, 10 drops; water 1 ounce. When the bleaching-process is finished, the photographic image will have entirely disappeared, leaving only the pen-and-ink drawing. If this solution does not act readily, it may be used stronger. On no account allow the solution to touch the fingers, as it is extremely poisonous. The best plan is to wear rubber fingertips, during the operation. Some workers use a solution of bichloride of mercury.

A. F. B.—Prices of professional work are determined largely by the character of the community where the studio is situated. A capable and self-respecting photographer should maintain a high standard of

technical excellence and, if necessary, educate the public up to that standard. This requires ability, tact and patience. Good work merits commensurate remuneration, yet enough to pay the studio a profit the size of which you, as proprietor, must determine for yourself. This applies to studio and at-home portraits, copying, and every kind of work done away from the studio, *which latter should include charges for traveltime.*

We can give no definite opinion, regarding prices you should charge, without knowing the grade of your work in its several branches. Prints submitted will be judged critically and fairly. Please include full return-postage.



The Economic Use of Developers

EDITOR OF PHOTO-ERA:

Many users of paramidophenol developers, or metol substitutes which come under that class, such as Fredol, Kathol, Duitol, etc., find that after some use, the solution gradually loses its power and slows up. At the same time a dark, muddy precipitate is formed. If small quantities of a saturated solution of sodium hydroxide (caustic soda) are added to the developer, this precipitate is dissolved and it regains its efficiency to a great extent. By doing this, occasionally, the developer can be made to do many times as much work as usual, and it is more economical.

JOSEPH COBURN SMITH.



Paste for Mounting Photographic Prints

To one pound of flour add one heaping salt-spoon of common (powdered) alum and one-half salt-spoon of salicylic acid. Mix with one pint of luke-warm water, to form a smooth paste. Add two salt-spoons of carbolic acid (to preserve it), and gradually add three pints of cold water. Place over a fire, and heat until it bubbles vigorously. Place in Mason jars. This formula makes about three pints.

MAUDE LEE ELDRIDGE.



Too much stress cannot be laid on the unwisdom of submitting to *The New York Times*, and to other first-class publications, poor, indistinct and badly prepared copy for advertisements.

Often an advertisement is wanted in a "rush" or "at once," or "press waiting," but the copy is improperly prepared. A printer, struggling to decipher the badly written copy, devotes to the setting of the advertisement about one-third more time than should be necessary.

If advertisements are prepared in good style, written with ink or typewriter on a good quality of paper, instead of with a soft pencil on poor paper, and some judgment allowed to the printer setting it, much valuable time will be saved and better results obtained.

The New York Times.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



New England Photographers' Convention

THE Photographers' Association of New England will hold its twenty-second annual convention at Springfield, Mass., September 27, 28, 29 and 30, 1920. The state of the Association's treasury is eminently satisfactory, thanks to the wise and progressive administration of President Manahan and his executive board. The paid-up membership has been swelled to 409; and, eager to increase it, the board offers a prize to the member who obtains the largest per cent of members in his state. The dues are, for photographers, \$3.00; employees, \$2.00; with full convention-privileges, and obviating the trouble of paying at the door. Candidates for membership should apply at once to their state vice-president.

The coming convention promises to be a record-breaker; for we learn that members are very enthusiastic, and highly praise the splendid work done by President Manahan and his officers. The picture-exhibit will include over one hundred pictures from the American Federation of Art, which comprises work of the leading pictorialists in this country.

The convention will open with a concert, followed by dancing and a social time, Monday, September 27, at 8 p.m. Tuesday evening, Gerard Thayer, son of Abbott Thayer (the eminent American artist), will give an illustrated lecture, "Nature-Ability to Camouflage." Wednesday evening, vaudeville-entertainment. All these features are open free to members of the P. A. of N. E.

There will also be practical demonstrations and lectures of high excellence, and an extensive exhibit by manufacturers and dealers. Altogether, this affair will be one to be enjoyed, and, once enjoyed, to be pleasantly remembered.

The present officers of the P. A. of N. E. are: W. H. Manahan, Jr., president, Hillsboro, N.H.; A. K. Peterson, 1st vice-president, Hartford, Conn.; Wm. A. Noetzel, 2d vice-president, Newton Centre, Mass.; Earl G. Mills, sec'y, Providence, R.I.; E. A. Holton, treas., Boston, Mass.; State vice-presidents: R. P. Jordon, Portland, Me.; Ira F. Lindsey, Manchester, N.H.; C. E. Shorey, Brattleboro, Vt.; J. R. Neville, Brockton, Mass.; Lewis Oliver, Providence, R.I.; W. E. Donnelly, New Haven, Conn.



A Belated Discovery

THE London papers have given much space to the escapades of the late Dora Hansen, a German woman who, for thirty years, masqueraded successfully as a man. For many years, under the name of Ferdinand Hansen, she was employed by a professional photographer in Leeds.

What wonderful possibilities for a photographic story! But here the Editor yields the palm to the peerless raconteur, H. A. Collings, who, with his picturesque imagination would evolve a "Corker" which he can spring at the next New England Convention. The Editor's improvisatory powers are having a short vacation.

The Camera Club—New York

A ONE-MAN show of the work of Bertram Cox, F.R.P.S., of London, England, one of the selecting judges of the pictorial section of The Royal Photographic Society, both this year and last, will be given at The Camera Club, No. 121 West 68th Street, New York, beginning September the first, 1920, and continuing throughout the month. All our readers are cordially invited to attend this notable exhibition.

The club held an exhibition of members' work during the month of August. This was not only the largest of its kind given in recent years, but the quality of the prints has never been surpassed by the membership. Besides the resident members, who responded in large numbers, those outside of the city contributed. Among these were Miss Helen M. Murdock and Mr. Horace A. Latimer, of Boston, Mass., and Señor José Luis Requena, of Mexico.

No Need to Make Bad Investments

It was pathetic to discover the large number of intelligent persons who were heavy losers in those oil-stock swindles, in New York, recently. Several photographers were included among these unfortunates; but, as it developed, *none of them read photographic journals!* If they had—including, of course, PHOTO-ERA—they might belong to those photographers of whom we have heard that they profited by the Editor's counsel and consulted a certain Boston investment-house, which has made its enviable reputation by dealing only in gilt-edged, well-paying securities, and sedulously protecting the interests of customers. A word to the wise is enough.

Fourth Los Angeles Salon

THE Fourth International Photographic Salon, under the auspices of the Camera-Pictorialists of Los Angeles, will be held in the Gallery of Fine and Applied Arts, Museum of History, Science and Art, Exposition Park, Los Angeles, U.S.A., January 4 to 31, 1921. Conditions, information, entry-blank and shipping-tag—all in one large, double, detachable folder, may be had on application to the director, Louis Fleckenstein, Room 31, Walker Auditorium, Los Angeles, Calif., U.S.A.

Brooklyn Institute of Arts and Sciences Department of Photography

THE proposed events of the Department of Photography for the season 1920-1921 are a loan-exhibition of prints; practical demonstrations (William H. Zerbe); lectures on photography and criticism; classes in instruction in art-photography (Clarence H. White); as well as in rudiments of photography, and field-work and demonstrations (William H. Zerbe). These are special opportunities that are open to any amateur or professional photographer living in Greater New York, for a moderate fee.

Full particulars are given in the prospectus, a copy of which may be obtained by addressing: Mr. W. A. Alcock, 346 73d Street, Brooklyn, N.Y.

Camera-Duels in the Air.

SCIENCE has made it possible for the aviator to learn in safety how good a shot he is against another flier. We read that René Fonck, the greatest of the French airmen who survived the war, recently had a sham aerial duel with the Belgian Fronval. Each machine was armed with a gun which carried a roll of photographic film instead of bullets. Fronval is credited with the victory, having made seventy-eight snapshots of Fonck's plane as against twenty-eight strikes registered by Fonck's camera.

The Camera-Club, New York A Permanent Members' Exhibit

W. G. BOWDOIN, art-editor of *The World*, New York, at the request of the print-committee, selected the best twelve pictures on the walls; and these are to be hung as a permanent exhibit. Those chosen were the work of the following artists:

C. A. Warrender, a nocturn and a harbor-scene, in high key; F. E. Vail, a portrait; Miss Lorraine Harding, also a portrait; Floyd Vail, F. R. P. S., a snow-scene, entitled "A White Christmas," that was hung at The Royal Photographic Society's exhibition, in 1918; M. W. Tingley, secretary of the club, a nude; Ben J. Luboshez, an interior of the Pennsylvania Station, New York; Miss Esta Varez, a figure-study; W. C. Owen, a decoration; John W. Allison, a beach-scene, with nude; W. E. Winmerding, a landscape; J. B. Tarbell, a buffalo-head.

One on Editor Beardsley

ALTHOUGH our Assistant-Editor is away temporarily in the mountains of New Hampshire to rest, and to forget the vexing problems that confront editors of photographic magazines, he has not been idle with his camera. In a recent letter he writes me that he had an experience that made him wonder if it really paid to make good pictures, and to encourage others to do so.

It seems that Editor Beardsley went to considerable trouble to make some "moonlight," waterfall and shore pictures. He did his very best to compose, expose and enlarge. In all, there were nine pictures. In the same house where he was stopping, was a very refined, educated lady, who, from previous conversations, he knew to be interested in pictures. She happened to be sitting on the veranda, when our Assistant-Editor came up the path proudly carrying the nine pictures. Naturally, he thought that the lady would like to see his latest pictorial efforts. He handed the pictures to her and smiled, as much as to say, "If I did make those pictures, myself, I think they're pretty good." She looked them over enthusiastically. Finally, Mr. Beardsley—who had not been watching her very closely—turned to her and asked which of the nine she thought the most interesting. She selected four and showed him each one in succession, and *every picture was held upside down!*

A Matter of Circulation

THE sick-room was hushed. The great editor lay dying. The nurse was weeping, and the doctor bent over him, feeling his pulse.

"Poor man," he said, "circulation almost gone."

The dying editor leaped from his bed. "It is *not*," he shouted, "it's the largest circulation in the country!"

Exchange.

Photographic-Patents

THE following patents are reported exclusively for "PHOTO-ERA" from the Patent-Law Offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending twenty-five cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of June, the last issues of which have been disclosed to the public.

Patent, No. 1,344,873, Exposure-Indicator, has been issued to Joseph Dutra Ferry, Niles, California.

Shutter-Actuating Apparatus, patent, No. 1,344,997, has been granted to Hans B. Emnrick, Giddings, Texas.

Edwin W. Tucker, North Prairie, Wisconsin, has been granted patent, No. 1,345,288, on Camera.

1,346,885, Process of Preparing Printing-Plates, Albert J. Hain, Lakewood, Ohio.

Film-Developing Device, patent, No. 1,347,032, has been granted to Winslow A. Hammond and James Hammond, Randolph, Neb.

Jean E. Stromberg, patent, No. 1,347,062, granted on Panoramic Camera.

1,347,109, Film-Cartridge, Arthur W. McCurdy, Victoria, British Columbia, Canada.

Gun-Camera, patent, No. 1,345,981, has been issued to Ernest C. Bass, New York, N.Y.

Anton Konieczny, Vienna, Austria, has been granted patent, No. 1,346,319, on Photographic Projection Apparatus.

1,346,461, Camera, Hector J. Perrier, Edmonton, Alberta, Canada.

Photograph-Cleaning Device, patent, No. 1,346,662 has been issued to Alfa Lomax, Atlanta, Ga.

George C. Beidler, Rochester, N.Y., has been granted patent, No. 1,346,780, on Method of and Device for Developing Films.

1,347,620, Photographer's Developing-Rack, Benjamin R. Day, Winfield, Kan.

Photographic Objective, patent, No. 1,347,673, issued to Lloyd C. Bishop, South Bend, Ind.

Guy R. Caley, Silesia, Mont., has been granted No. 1,347,681, on Masking-Attachment for Photographic Finders.



Prints by Lightning

ACCORDING to the *London Morning Post*, there have been more marvelous cases of lightning-photography than that which befell the unfortunate soldier at Chertsey during a recent storm when branches of the elm-tree beneath which he was sheltering were reproduced in pattern on his body when he was struck dead.

In the Department of Seine-et-Marne, some years ago, a peasant girl had a picture of a cow she was herding printed on her breast by a flash of lightning. The cow was killed, but the girl recovered. An Italian sailor, killed by lightning as he sat near the mast, had upon his back a print of a horseshoe that was nailed to the mast.

But, perhaps, the most remarkable case of the kind was that related by John Still, the famous Bishop of Wells. A storm broke over Wells Cathedral during a service. Afterward the Bishop, his wife and many members of the congregation found themselves marked with a cross on various parts of the body. Not a soul was injured by the lightning.



LONDON LETTER

CARINE AND WILL CADBY



SIXTY-FIVE years ago the Photographic Club,—presumably of London,—appears to have been in the habit of publishing occasional sets of the best photographs of the time. We have before us, as we write, the issue for the year 1855, a costly and elaborate volume, and it affords extremely interesting study. The illustrations are direct, shiny silver-prints, stuck in by hand. On the opposite page is printed all particulars of the making of the negative, and how the plate was developed; very useful information at that time, for most photographic processes must still have been in the experimental stage. One quite attractive open, sunny landscape was given an exposure of twenty minutes, and was made by "the wax-paper process." An eight-minute exposure of a waterfall seemed pre-doomed to failure. The frontispiece, a portrait of Sir John Herschel, Bart.: F.R.S., by John Stewart, is a particularly fine study of a splendid subject, and we gathered from the rather involved notes that it was made as early as 1839 or 1840.

Most of the pictures are in a fairly good state of preservation in spite of their great age and the printing-process employed; but one realizes from some of these studies that at least not all the fathers of photography were as successful with portraiture as the moderns. For instance, there is a close-up study of two girls, by Lake Price, called "The Miniature," which is harder and much more conscious than any present-day attempt at a similar subject would be. But in judging, we must remember the ordeal of the long-suffering sitter of that date, when exposures appear to have been anything from eight to thirty minutes. Another point one realizes, when looking at early photographic efforts, is that the workers had not our experience in the matter of what will, and what will not, photograph. Quite a number of these prints attempt what we, of the present day, should at once decide was impossible, and have in consequence naturally failed. But apart from any other point of view, this old volume is invaluable as a record of the costumes of that time.

The British Photographic Industries Ltd. is making a new issue of preferred and ordinary shares. The company, which was formed in 1915, owns over ninety-nine per cent of the capital stock of Houghton's Ltd., W. Butcher & Sons Ltd., The Houghton-Butcher Manufacturing Co. Ltd., Austin Edwards Ltd., Fordham and Co. Ltd., and Batchelor's Film Service Ltd., and represents the largest combination of British manufacturing and distributing interests in the photographic industry. The American reader will understand better the strength of the combination when we say that the well-known trade-marks, "Ensign," "Klito," "Primus," "Carbine," and "Cameo," are all represented and combined in the British Photographic Industries Ltd. The proceeds of the present issue will be used for paying off mortgages, secured debentures and loans and floating indebtedness, and for the general development of the businesses of the associated companies, including factory-extensions.

Rises in the prices of some photographic chemicals still continue. The economic war seems to have replaced the real war in earnest. This is particularly observable where chemicals are done up in small quan-

ties, and points to the heavy extra cost of packing-materials and labor. Since we wrote last, the price of pyrogallic crystals in one-ounce bottles has risen, although the price per pound is not altered. Alum is 6 pence per pound instead of 4 pence a month ago. Soda carbonate is 1½ pence per pound, and hyposulphite and sulphite of soda both show material increases in price. During the war, these chemicals were at times almost unobtainable by the ordinary photographer. Now there appears to be a fair supply, but at high prices. Most photographers know Lindenmeyer's cover-papers of useful and beautiful tones, so well suited for the mounting of photographs. Before the war, we were in the habit of buying them at very low cost by the ream or half ream of full-sized sheets, of which, luckily for us, we still possess a good stock. A few days ago, we noticed that these same papers were being sold in a London shop at 4 pence to 6 pence a sheet, according to the thickness.

A quite charming story of the Prince of Wales as photographic expert comes from New Zealand. The Prince noticed a girl trying to photograph him from fifty yards away. He called out that she was too far off, so she came close, but in her agitation got her film jammed. The Prince set it right, and she was about to snap him, when he pointed out that the sun was shining directly into the lens. (When, we wonder, will young ladies learn that this must not be?) With the help of these kindly and experienced hints, the exposure was made at last, and we can only hope that nothing went wrong with the development of the exposed film, for it would be of exceptional interest, the Prince having taken such an active part in it.

Every summer, our illustrated press breaks out in a rash of bathing-photographs. Last year, it was only during July and August that the malady was at its height, and one grew weary of the eternally smiling maiden in an abbreviated bathing-costume who appeared just as pleased if there were water in the picture or not. But this year, we are not being let off so lightly. In early May, there was an outbreak of the epidemic. The snapshots—probably last year's work—were headed "Early Bathing at Brighton," or "May Mermaids at Margate;" and when, luckily for the photographers with a large stock of bathing-pictures and an alliterative turn, the weather continued to be fine all through June, the complaint became serious, and we fear now that there is no hope for us and, probably, we shall be deluged with "Seashore Snapshots" in September, and "Open-Air Bathing" in October.

A few weeks ago, an illustrated Sunday-paper gave us a slight variation of the theme by demonstrating a contrast. Two photographs were placed side by side with the heading, "Damp and Bedraggled Frights or Bathing Belles: Isn't it Simply a Question of Dress?" The first picture is a group of ladies modestly attired in the bathing-costumes of twenty years ago—very much covered up and with caps which would be trying to a Venus. Underneath was written: "Who, for instance, would take out binoculars for a group like this?" The second picture, the same group of girls, who "would place binoculars at a premium," may be imagined. Scanty futuristic patterned costumes, highheeled shoes, bizarre hats and sunshades.



WITH THE TRADE



Avoid Arguments with Customers

OUR cotemporary, *The Bulletin of Photography*, advocates that all photo-salesmen, whether on the road or behind the counter, abstain from arguments with customers, because it sometimes leads to unpleasantness that may be permanent, as a result of which, the customer may be lost to the firm. The following advice is presented: "Stay away from arguments, for arguments between salesman and customer are invariably business killers, at least so far as the seller is concerned.

"The customer must be accorded every courtesy, if the clerk or proprietor expects to do business with him. Friction may sometimes occur, but no matter what the cause, rough-shod methods should not be used by the seller.

"A sarcastic tongue in a salesman may be likened to a two-edged sword that cuts deeply in many directions—it kills customers, slashes profits and eventually eats his own throat.

"A smiling face and affable manner will win the day and make friends. This may be said to be the secret of the success of the man behind the counter, whether he be proprietor or clerk. Avoid arguments."

This is all very well; but what the customer wants most is the assurance of satisfactory goods, prompt delivery and satisfactory service. If these factors do not prevail, the smiling countenance and cordial approach are of little value. After all, the customer is willing to do without the delightful personality of the salesman, provided the latter be not absolutely rude or disagreeable. All the same, a discussion of matters that are foreign to the business, not only wastes the time of the customer and the salesman, but of the firm, and can be indulged in at other and more convenient times.

Cohn & Krug—Photographers

READERS of PHOTO-ERA who have read the instructive articles by August Krug, published in PHOTO-ERA during the past few years, may be interested to know that this accomplished amateur-photographer has united with Mr. Alfred Cohn, in forming a partnership in conducting a professional portrait-studio, situated at 112 South Elliott Place, Brooklyn, N.Y. The firm is prepared to produce not only original portraits, but illustrations, advertisements, booklets and posters.

Larger Quarters for Abe Cohen's Exchange

WE are informed by Abe Cohen's Exchange, Inc., that this live, progressive and enterprising photo-stockhouse—feeling the great need of more commodious quarters for its increasing business—has removed to 113 Park Row, New York City, which new building will afford the firm much larger space, and enable it to take care of customers in a better way. This removal also means that Abe Cohen's Exchange will carry a much larger stock than hitherto; and patrons will thus have a more extensive line of goods to select from. We invite our readers' attention to the firm's advertisement in this issue.

Photo-Finishers Worthy of the Name

ALTHOUGH PHOTO-ERA is doing its best to encourage proprietors of strictly first-class photo-finishing establishments, and to explain the difference between good and bad work, inferior photo-finishers will continue to flourish and to deceive the public. Naturally, individuals who accept mediocre work are usually quite satisfied, and recommend their photo-finishers to friends who are accustomed only to the finest results in printing. Consequently, there is much cause for dissatisfaction. This journal has received an unusually large number of complaints, this season, from this source; and all that the Publisher can do is to recommend the skilled class of photo-finishers. Elsewhere, in this issue, he has recommended a number of highly efficient technicians; and he would like, if possible, to publish the name of at least one such from every large city.

Visitors to Philadelphia, and others who like to have their photo-finishing done in that city, will be interested to know that the proprietor of The Photo-Shop, 2234 North 29th Street, is one of the most skilled and conscientious technicians in this country. He gives to each film, plate and enlargement individual attention, and aims to carry out to the best of his ability the wishes expressed by his customers.



An American Photo-Chemical Expert

THAT expert and resourceful manufacturer of photographic chemicals and specialties, John G. Marshall, is meeting remarkable success in the sale of his products throughout this country. There is scarcely an important photographic specialty that he is not able to duplicate, and even surpass, in quality and efficiency. He informs us that he has just been licensed by the Chemical Foundation, Inc., to use the trademark of Rodinal. This popular and non-staining developer is regaining its old-time popularity. It is made in a concentrated solution, and needs only the addition of water, to make it instantly available.

Write to Mr. Marshall for his descriptive list of American-made photographic developers and other specialties.



Rare Business-Opportunity

A RARE opportunity to purchase a fine and prosperous photographic studio and art-store combined, situated in one of the largest manufacturing cities in New England, is offered to an active and enterprising individual—be it a man or a woman. The studio in question is advertised elsewhere in this issue. The proprietor has been known to the Publisher of PHOTO-ERA for thirty years. For this reason, he can vouch for the high character and prosperity of this studio, which with its wealth of valuable negatives, is worth at least \$30,000. However, the present proprietor is ready to talk business with the right party. Opportunities like the present one are really quite rare.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

A MEMORIAL VOLUME, containing an account of The Photographic Researches of Ferdinand Hurter & Vero C. Driffeld—Being a Reprint of their Published Papers, together with a History of their Early Work and a Bibliography of Later Work on the same subject. Edited by W. B. Ferguson, K.C., M.A. Oxon, F.I.C., F.R.P.S. Quarto, cloth; 374 pages, including a bibliography and complete index of names and subjects; copiously illustrated with portraits, diagrams and tables. Price, buckram-binding, \$9.00, post-paid. London, 1920: The Royal Photographic Society of Great Britain, 35 Russell Square, W. C. Tennant & Ward, American Selling-Agents, 103 Park Ave., New York, U.S.A.

This is the most notable photographic book published since Hunt's "Researches on Light," in 1844. It would be impossible to overestimate the value of the research-work to which were devoted the lives of these two indefatigable investigators, Hurter & Driffeld. As the late Mr. F. F. Renwick stated, in his memorial lecture: "The mere invention of a practical method of determining and expressing the light-sensitiveness of a plate would, however, never have given Dr. Hurter that niche in the Temple of Fame which he justly occupies, if it had not been a system which contained within itself the capacity of adaptation to the needs of later workers and different circumstances, and had it not been built on a sound, scientific foundation. It is true that the serious, if not insurmountable, difficulties of standardizing the conditions of speed-testing throughout the industry, the comparatively wide variations in the shape of characteristic curves of commercially useful dryplates, and the proved unsuitability of the true H. & D. speed-number alone, as a guide to exposure in certain important branches of photography (not to mention the baneful influence of commercial advertising) have all contributed to cause published speed-numbers to be regarded with considerable distrust. Nevertheless, it is literally true to say that the Hurter & Driffeld characteristic curve is, and will doubtless remain, the most compact and lucid means of expressing quantitatively the qualities of any and every light-sensitive material."

Space does not permit a complete analysis of this unique work. Suffice it to say that it contains the following illuminating chapters: "Photo-chemical Investigations, and a New Method of Determination of the Sensitiveness of Photographic Plates"; "Communication on the Accuracy of the Grease-Spot Photometer, for Measuring the Density of Photographic Plates, and a Note on the Sector-Photometer, by Capt. W. de W. Abney," and "Reply to the Captain Abney Communication on the Foregoing Subject"; "Measuring the Density of Negatives"; "The Sector and Grease-Spot Photometer and their Results"; "The Action of Light on the Sensitive Film"; "Relation between Photo-negatives and their Positives"; "Latitude in Exposure and Speed of Plates"; "The

Principles Involved in Enlargement"; "The Latent Image and its Development"; "Control of the Development-Factor, and a Note on Speed-Determination"; "The Hurter and Driffeld System—a Brief Account of their Photo-chemical Investigations and Method of Speed-Determination."

There can be no genuine enjoyment of the practice of photography by any individual without a scientific understanding of the chemical structure of the emulsion, and the influence exerted upon it by natural or artificial light. These and kindred subjects are presented in this volume, as the result of the devotion to science of two men who will forever occupy an eminent place in the history of photographic science.

No photographic library worthy of the name is complete without a copy of the work of these two distinguished collaborators. Only a limited number of copies have been printed; and those interested should lose no time to send their orders to the American agents.

Standard Books at Old Prices

READERS interested in standard books on photography will please take notice that after August 1 the price of the well-known and popular work, *Photography and Fine Art*, by Henry Turner Bailey, will be \$2.50, instead of \$1.50, as hitherto. PHOTO-ERA has on hand, however, a few copies, which will be sold to its readers at the old price of \$1.50, until the supply is exhausted; after which the price will be \$2.50. First come, first served!

Pursuing this policy, PHOTO-ERA will sell other standard photo-books at the old price, until the present stock is exhausted:

Wall's Dictionary of Photography, \$2.50, *post-paid*; regular price, \$2.50 *plus postage*.

Topsy and Turvy, by Carine and Will Cadby, \$1.50, *post-paid*; regular price, \$1.60 *plus postage*.

Practical Kinematography, by Talbot, \$1.35, *post-paid*; advance-price, \$1.50 *plus postage*.

Professional Photography, by Hewitt (two volumes), \$1.25 *post-paid*, for the two; advance-price, \$1.75.

Photograms of the Year 1919 (current issue), \$2.00 *post-paid*; regular price, \$2.00, *postage extra*.

Retouching and Improving Negatives—Photo Miniature (out of print), 35c.; advance-price, 50c.

Behind the Motion-Picture Screen, by Lescaboura, \$3.50 *plus postage*, according to zone (weight three pounds); advance-price, \$5.00 *plus postage*.

It is to be understood that the above-mentioned books are to be sold at the *old price*, as indicated; and enterprising readers will do well to take advantage of this offer.

Anderson's Pictorial Landscape-Photography

This important and charming volume, with its masterful illustrations by the author, went totally out of print, over a year ago, when orders for it could not be filled. We have advertised for copies in perfect condition, and, having now a limited supply, can fill orders at once. Price, per copy, \$2.00, *post-paid*.

Not in Photo-Era Class

A MAN died owing a Missouri editor six years' unpaid subscription to the paper. The editor did not send any flowers. He attended the funeral and tenderly placed a palm-leaf fan and a block of ice on the casket.

Cincinnati Inquirer.

Our Illustrations

(Continued from page 151)

the left, released the shutter and captured a truly artistic group. Data: May, 4 P.M.; sunlight; 4 x 5 Graflex camera; 18 c.m.—Carl Zeiss F/4.5; at stop, F/6.3; 1/440 second; Seed 30 plate; pyro; enlargement on Azo Hard.

In securing an artistically happy arrangement of polo-players, as shown in his prize-picture on page 141, Mr. Erickson was doubtless of the same optimistic frame of mind as his *confrère*, Mr. Fineberg of the *Boston Post*. As an expert sports-photographer, he must have known that the players at the right would swing towards the ball—thus affording the photographer the coveted opportunity of a spontaneously composed picture. He made a number of others—as he wrote me—in which the players were either running in one direction (out of the picture) or forming a confused mass. Thus, speed-pictures—such as have been honored by the PHOTO-ERA jury—are not altogether the result of luck. Data: March, 4 P.M.; weak sunlight; 5 x 7 Graflex; 17-inch Ross Telecentric; F/6.8; 1/440 second; Portrait-Film; metol-pyro; print on P. M. C. No. 4.

Example of Interpretation

As a fair example of the way to interpret the next subject for competition, in the Advanced Class—"Architectural Subjects," which closes October 31—we present a pleasing composition by Mrs. C. B. Fletcher. Here nature and architecture are blended harmoniously in a picture of poetic beauty. It received Honorable Mention in a similar competition, seven years ago. Data: 5.30 P.M.; 9½-inch Euryplan lens; used at full aperture (F/5.6); 1/10 second; 5 x 7 Cyko Plat. print, sepia redeveloped.

Beginners' Competition

In his picture that received the first prize, this month, Harold B. Neal contrived to produce a happy arrangement of architecture, trees and flowers. The little building finds itself in a very delightful setting—with the flowers forming a very pleasing line. Technically, too, the composition merits warm approval. Data: June 15, 1920; sky overcast with light clouds; 8 x 10 view-camera; Voigtländer & Son's Collinear, series II; F/22; ½ second; 8 x 10 Hammer D. C. Ortho.; M. Q.; contact-print on Prof. Studio Cyko.

R. H. Addison has shown much artistic feeling in his "March-Morning," page 146. The view itself is attractive—a bit of beautiful nature to be admired, but not necessarily to serve as a model of pictorial composition. Had the camera been directed more to the left and the double tree in the middle foreground retouched out of the negative (not an easy task), a more artistic picture than the present one would have resulted. Data: March, 9 A.M.; dull; 2½ x 4¼ Eastman Camera; M. A.—4½ at stop 3; 1/25 second; film; Hydro. Azo print.

Our Contributing Critics

CONSCIOUS of the shortcomings of his print of a box of chocolates—although it received the first prize in a photo-competition conducted by a well-known local candy-firm—Mr. Russell T. Neville cheerfully offers it for critical comment to our coterie of assistant-critics. Page 148. Data: Cooke F/5.6 lens; Seed plate—sufficient to suggest to the maker that a photograph made to suit certain advertising-requirements may not always prove to be a work of art.

PHOTO-ERA Advertising-Requirements

PHOTO-ERA will accept no advertising-copy from persons unknown to the Publisher, unless it be accompanied by satisfactory endorsements of the business-integrity of the applicant, and of the excellence of the article to be advertised.

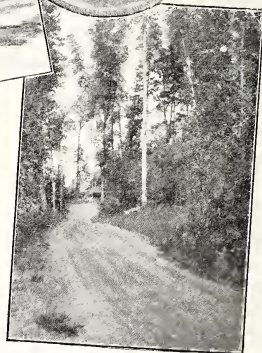
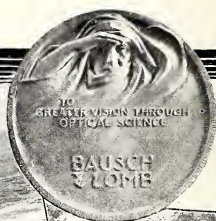
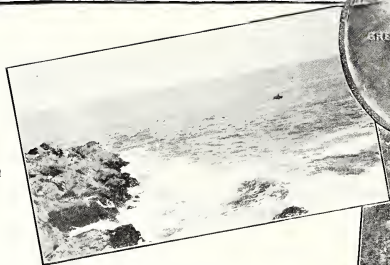
APPLICANTS for positions as operators, salesmen or assistants must furnish evidence of their efficiency and moral character.

PERSONS offering for sale studios, or cameras, lenses and other photographic articles, must furnish proof of their good standing and financial responsibility; for obviously PHOTO-ERA will not be the medium of transactions about which there is likely to be the least question.

FURTHERMORE, the Publisher reserves the right to refuse applications for space without giving the reason for so doing.

By pursuing this policy, PHOTO-ERA can vouch for the reliability of all its advertisements

Negatives by
Gen. C. C. Sniffen, U.S.A.



Preserving the Summer

Snapshots really worth saving, those that will hold their interest longest, must often be made under conditions requiring a superior lens—preferably a

BAUSCH & LOMB *Tessar Lens*

The Tessar Ic, F/4.5 is essentially a speed-lens, having twice the speed of the ordinary camera-lens. It enables one to take sharp, clear pictures even under the most adverse light-conditions, making possible good snapshots where a common lens would necessitate a time-exposure; when light is good, it will stop the fastest moving object.

The Tessar Iib, F/6.3, with twice the speed of an ordinary lens, can be fitted to almost any hand-camera, and is especially recommended for use on small cameras, where the negatives are to be enlarged. It is the universal anastigmat, with speed enough for snapshots in the shade, and especially fitted for copying, enlarging and lantern-slide making.

Our complete photographic lens-catalog, recently issued, will be sent upon request to anyone interested.

BAUSCH & LOMB OPTICAL COMPANY

622 St. Paul Street, Rochester, N.Y.

NEW YORK

CHICAGO

SAN FRANCISCO

WASHINGTON

Leading American Makers of Photographic Lenses, Microscopes, Projection Apparatus (Balopticons), Ophthalmic Lenses and Instruments, Photo-micrographic Apparatus, Range-Finders and Gun-Sights for Army and Navy, Searchlight-Reflectors, Stereo-Prism Binoculars, Magnifiers and other high-grade Optical Products.

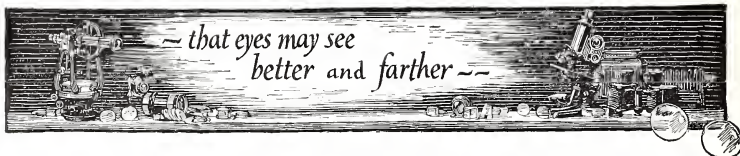


PHOTO-ERA the Blue-Book of Photographic Advertising

OCTOBER

1920

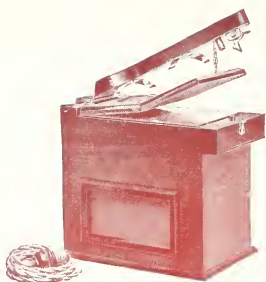
25 CENTS

PHOTO-ERA

The American Journal of Photography



BOSTON, U. S. A.



ANSCO

5 x 7

PRINTING MACHINE

Price: \$10

This Ansco Printer takes the bother out of printing. The amateur photographer who uses it gets more uniform results, more conveniently, and in shorter time. It makes printing sure and simple in any kind of room that has electric current. It is especially well adapted to the requirements of the commercial photo-finisher.

DETAILS: Takes negatives up to 5 x 7; has ruby glow and uses a standard 40-watt Mazda lamp as the printing light; lower window provides orange light for developing prints, and ruby safe light for developing plates and films.

Built with the same care for essential *rightness* that has made Ansco cameras famous.

Ansco Company
Binghamton, N. Y.



"FAIR AUTUMN"
DR. J. B. PARDOE

PHOTO-ERA

The American Journal of Photography

Copyright, 1920, by Wilfred A. French

Vol. XLV

OCTOBER, 1920

No. 4

Hand-Camera Work with Ray-Filters

WILLIAM S. DAVIS



HAT most workers dispense with a ray-filter when making exposures without a tripod is a fact easily confirmed by personal inquiry, or reference to the data accompanying many of the illustrations reproduced in the photographic journals. Assuming that the camerist is sufficiently advanced to realize the advantages gained by employing suitable filters upon many subjects, for the purpose of imparting more truthful rendering of various colors to their relative monochromatic values, the only reasons which can be given for discarding them in hand-camera work are a certain feeling of carelessness as to the finer points of photographic technique when making snapshots, which would not be assumed when handling a large camera in a more deliberate manner; and the idea that the necessarily longer exposures render the use of a filter impracticable in this kind of work. The latter reason is certainly a sound one, when rapidly moving objects necessitate very quick shutter-exposures; but, in these days of highly sensitive orthochromatic emulsions, and outfits commonly equipped with lenses of much greater working-aperture than was once obtainable, the increased exposures made necessary by the presence of a ray-filter on the lens are not as important a factor in the average run of work, as many probably believe. Indeed, if the reader will go over a batch of say fifty average snapshots, he will doubtless be astonished to note how few of the subjects really needed a rapid exposure to stop motion—probably not more than twenty per cent., at most, required a shutter-speed faster than 1/25 second; and of the remainder perhaps one-half might even have been taken by giving short time-exposures, if a solid support for the camera had been available.

The only question, where motion is not an important factor to overcome, is, how slow a shutter-exposure can one give when the camera is held in the hand, without danger of blurring

the image? Of course, the answer depends upon the steadiness with which the camera is held—something that varies with different persons; the difference being mainly due to *the way the instrument is held* while the shutter is released. By standing firmly with the camera pressed against the body with one hand, while the shutter release is operated by an *even* pressure from the other, thus preventing the jar accompanying a sudden, jerky, pressure of the release when the camera is held loosely in the hand, it is possible to give as long as 1/5 second with comparative safety; and a shutter-speed of 1/10 second, under like conditions, may be considered absolutely safe. The latter exposure is also brief enough to allow the inclusion of slowly moving objects if they are not too near the lens; so, if one takes this as the maximum length of exposure which can be safely given without a tripod or other solid support, reference to any standard exposure-table will show whether a given subject can be photographed in this way, after making due allowance for the multiplying factor of the ray-filter it is proposed to use. Naturally, as the aperture of the lens, as well as the sensitiveness of the emulsion of the plate or film employed, determines the duration of exposure necessary under any given conditions, the worker limited to a simple box fitted with a lens whose maximum opening is around F/16, together with a one-speed shutter working at about 1/25 second, will not find it practicable to use a filter in snapshot-work; but, given an outfit provided with a lens working at F/8, or larger, and a good shutter giving a range of slow speeds between 1/5 and 1/25, a surprisingly wide field for the use of a filter is opened up, which, of course, is increased in proportion to the aperture of lens available. For example: taking stop F/8, a plate-speed of 111 Wynne or 180 Watkins, the exposure-table which appeared in PHOTO-ERA regularly for several years gives 1/50 second as the correct exposure for average landscapes with



SUMMER-CLOUDS
WILLIAM S. DAVIS



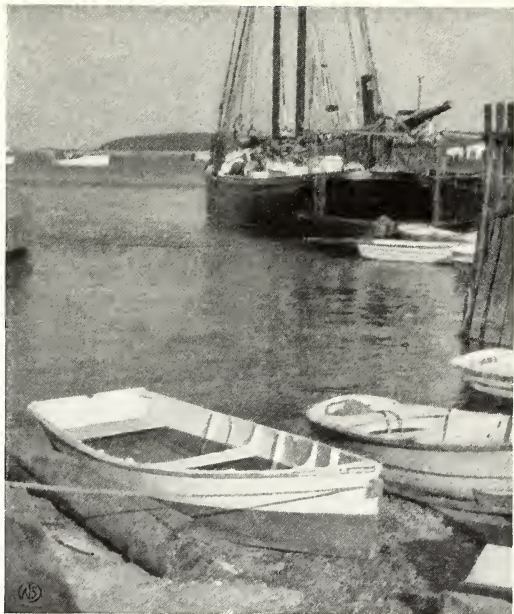


PINES

WILLIAM S. DAVIS

light foreground, light-colored buildings, and river-scenes, at 9 A.M. or 3 P.M. on a clear, bright day in summer. Under these conditions, therefore, $1/10$ second is five times the estimated exposure, allowing sufficient margin for the employment of a ray-filter of the strength most generally used which requires only 3 to 4 times increase over the normal exposure without a screen. The same table cuts the time of exposure to one-half for beach and open shipping-scenes—a class of material, by the way, where a filter is very often of the greatest value in bright sunshine—and to one-fourth for sea and sky alone, thus making it possible to increase the shutter-speed sufficiently to secure many of the subjects in motion which one would be likely to encounter, such as surf, groups on the beaches, and craft under sail. The above-named plate-speed is not, however, the maximum available, since such

emulsions as the Ansco Speedex and Eastman Speed-film (both of which are orthochromatic) possess practically double the speed, and a similar rating is given also for the Barnet Super-Speed Ortho. plates. It is obvious that such speedy emulsions give additional latitude in the use of a filter; but even more is conferred by the employment of lenses of large working-aperture, the speed of which can be successfully taken advantage of without serious loss in depth of definition when the shorter focal lengths are used—i.e. those that are fitted to good pocket-cameras. The focus of the lenses usually fitted to cameras not over $2\frac{1}{2} \times 3\frac{1}{2}$ inches in size does not exceed $4\frac{1}{2}$ or 5 inches, which makes it possible to work at an aperture of $F/4.5$ upon the average class of outdoor subjects: an effective speed approximately $3\frac{1}{2}$ times that of $F/8$. Even though such an aperture is not available, the



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more moderate-priced anastigmats working at from F/5.6 to F/6.3 pass at the first-mentioned aperture double the light of F/8, and about two-thirds as much in the case of the F/6.3 lenses. Combine such extra light-passing power with the rapidity of speed-film or a super-speed plate, and it will often be found practicable to use a ray-filter when giving exposures of from 1/25 to 1/50 second when there are no dark objects or shadows in the immediate foreground.

The type of ray-filter upon which the foregoing calculations are based, is the strength most commonly used, which requires an increase of three to four times over the normal exposure without a filter, the exact increase called for varying somewhat according to the make of plate or film employed, since orthochromatic emulsions are not all equally sensitive to yellow. Among the best known filters of this grade are

the Ingento series "A," Wratten K1, and Cramer Isos II. In this connection, it will not be out of place to note that with a filter of given strength much less increase in exposure is called for when panchromatic plates are used, as they are vastly more sensitive to deep yellow and orange than even the best ortho. emulsions, the Wratten K1 filter, for example, being classed as 3 times for ortho. plates though requiring only 1½ times the normal exposure with the W & W Panchromatic. Still lighter-colored filters can be had, such as the Cramer Isos I, which the makers list as a 2 times filter with their Iso plates. Such a filter cannot, of course, give as much color-correction as a darker one; but is often very much better than none, and, therefore, valuable when a greater increase in exposure cannot be given. Another distinct form of ray-filter is the graded tint, which can be so placed on the lens

that the palest, or even colorless, portion, is over the darker parts of the image while the strongest tint holds back the lighter parts, like the sky, thus enabling one to secure clouds without giving much if any extra exposure upon the foreground. Such filters, however, are not of as much value as the regular kind when the skyline is very much broken by tall objects cutting against the sky, to say nothing of not giving as good correction upon colors in the foreground.

In any circumstances, the chances of using a filter in snapshot-work are much increased when the lens is equipped with a shutter giving a full

the image, if adjustment is not made. Usually, the lens must be moved slightly nearer the sensitive film when a filter is in place—the amount depending upon the length of focus of the lens and the particular ray-filter used—different ones of the same make sometimes showing a variation in the degree of correction needed; but once this is found by visual focusing and the correct position noted, no further difficulty will be experienced.

A lens-hood which can be used when the ray-filter is in position is conducive to the production of cleaner, more brilliant, negatives by cut-



AFTERNOON-SUNLIGHT

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range of automatically controlled slow speeds. I have commented before upon the fact that some excellent cameras of moderate price are limited in their usefulness for snapshot-work from being equipped with shutters that give but a limited range of speeds, starting with $1/25$ second, as the slowest. The lack of slow speeds is felt especially when the lens possesses only a moderate working-aperture, since one has no choice but to give a time-exposure, if $1/25$ is insufficient: whereas, if able to set the shutter at speeds of from $1/5$ to $1/15$, this gap is filled satisfactorily.

In fitting a filter, it may be necessary to place an extra focus-scale on the camera, as most filters affect the focus of the lens enough to blur

ting off extraneous rays of light which would otherwise reach the front surface of lens and filter, causing a general hazy or foggy appearance of the image when working more or less against the light, on bright days.

One thing I wish to make clear before closing, namely, that I am not advocating the use of ray-filters at the expense of *full exposure*. Although a filter is a great aid in improving the rendering of many subjects, its value is more than offset by the bad effects of underexposure. Consequently, if conditions are such that correct exposure cannot be given with the filter, it should not be used. The point I have tried to emphasize, however, is that instead of thoughtlessly employing a fast shutter-speed, when there is

not sufficient movement of the subject to require it, one can often slow down on the exposure and get the benefit of a ray-filter without under-timing the negatives.

By way of illustrating these remarks I am presenting several snapshots made with a $2\frac{1}{4}$ x $3\frac{1}{4}$ pocket-camera equipped with an F/8 R.R. lens, which shows that, even without a lens of large aperture, considerable work can be done along the lines already indicated. The filter used in each case was an Ingento series "A" and the exposures made on Speedex roll-film. The prints are straight enlargements on P. M. C. bromide.

The one called "Summer-Clouds" was made on a very bright day in August at about 10 A.M. (standard time) facing west, the exposure being 1/25 second with the lens stopped down to F/11. Note the relative tone-values of foliage, patch of growing corn, sunlit portions of the white house and the sky. With the long scale of tones present in this subject, it would have been practically impossible to have held the cloud-effect with correct exposure for the foreground, had a ray-filter not been used.

"Pines" received an exposure of 1/10 second, with stop F/8 in April, at 3.15 P.M. The sunlight, while good, had the soft quality characteristic of this season of the year. While the reason for using a filter in this instance may be less obvious than some of the other examples, I wished particularly to preserve the relative tonality between the bronze-greens of the pines and the soft blue-gray of the sky.

"Snug in Port" shows that a filter can be used quite late in the afternoon, when the light is good and the subject a fairly open one, without underexposing. This picture was made at 4.35 P.M. (standard time) in August, by an exposure of 1/10 second, with the lens stopped to F/11 to get sharper marginal definition. The objects were mainly in full sunlight. The differentiation in values between the sky and white boats, as here shown, is usually impossible to render clearly without a filter.

"Afternoon-Sunlight." This coast-subject was "taken" when the sun was back of a cloud, leaving the entire foreground in diffused light. The exposure was 1/25 second, stop F/8, at 2.30 P.M. late in November. While the clouds and water might have been very well rendered without the use of a ray-filter, it would have been at the expense of the foreground.

Among the subjects not illustrated, upon which a ray-filter can generally be used to great advantage, is flying spray in sunshine against a blue sky (a combination often met with in summer after a heavy gale has broken); white

sails in sunshine; and most open landscapes with snow on the ground, when blue shadows and sky are important elements of the composition—all of which can generally be secured by an exposure with the camera held in the hand. [In mentioning slow instantaneous exposures made without the use of a tripod or other form of base, Mr. Davis appears not to have had in mind the very simple method employed by Mr. William H. Blacar, and described several times in this magazine. It has several important advantages, one of which is its appeal to camerists of a nervous temperament. The method is as follows: The camera is held firmly, the hands grasping the sides and base, and on a level with the eyes. In this way, the camera is not easily jarred. The end of the antinous or wire release is held between the lips, and the exposure made by the tip of the tongue pushing the end of the release, which operation can be facilitated if the end of the release is provided with a small, flat disc. This method of releasing the shutter can be made without causing the least jar to the camera. Mr. Blacar is so accustomed to his method, that he is able to give as slow an exposure as one-tenth or even one-fifth of a second, obtaining pictures that show no trace, whatever, of movement or jar. It is suggested that this method be practiced by interested workers, as it will prove very useful wherever an exposure of one-fifth to one twenty-fifth of a second is to be made without the use of a tripod or other rest. EDITOR.]



The Joy of Intelligent Work

HALF the pleasure in making pictures by photography is the intelligent appreciation of cause and effect—to have at least a working-knowledge of pictorial composition, photographic optics and photographic chemistry. To work always with mechanical precision, according to a set of printed rules, in order to obtain a technically satisfactory result, seems to be the Alpha and Omega of many camera-users. But after a while the process become monotonous and tiresome. To know the character and limitations of the lens, what constitutes an artistic picture, and the effect of a correctly timed exposure; to gauge the development of the latent image, and to manage skilfully the succeeding operations, until the finished print shall proclaim success—these are joys that are experienced only by a creative artist.

W. A. F.

Photographic Exhibitions in Germany

M. A. R. BRUNNER



STUTTGART, the well-known publishers' town, and a royal residence until the outbreak of the revolution, was selected, this summer, for holding a photographic exhibition.

Three large groups were to be displayed—viz., appliances such as cameras, plates and chemicals; then the productions of professional photographers, and those of amateurs. All the leading firms were represented. To one of these our embassy in London had sent a communication to the effect that there is a considerable demand in Great Britain for high-class lenses, films and cinematographic apparatus of German design and workmanship, and that this demand cannot be filled, even approximately, elsewhere beyond the German borders. The motion-picture film is really a specialized photographic industry, and justifies great hopes. Much has been done to develop the school-kinema and the family-kinema, for which there is considerable demand, in spite of the enormous prices which prevail, and which are ten to fifteen times as high as those which obtained before the war.

A well-known optical firm had arranged a highly instructive exhibition of the entire process of lens-production, showing more than one hundred phases, starting with the original, raw material and ending with the completion of a high-class camera-lens. In several groups, a novel arrangement was noticeable—viz., the juxtaposition of antiquated and modern cameras and accessories; of old and new processes; of correct and incorrect methods, of flat and effective results—making clear, even to a layman, the striking difference between old and improved processes. A description of the various novelties, or of the exhibits in general, I cannot attempt for lack of space. I may mention, however, the following features: a tripod-case, which serves also to lengthen the tripod, to be screwed to the latter when in use; an automatic release to enable the photographer to make pictures of himself without any outside assistance, and capable of being carried in the smallest waistcoat-pocket; and a novel and simple method of packing plates, surpassing all previous ones.

The art-exhibit consisted of photographic masterpieces. Among the special groups mention should be made of detective-photography, to which the Stuttgart police had contributed a number of photographs. Lectures on various subjects were a valuable feature of the occasion.

A much smaller exhibition was held in the picturesque, mediæval Westphalian town of Bielefeld, under the auspices of the North-Western German Photographic League. Intended at first only for professionals and amateurs, it was, however, finally thrown open to the public.

Artistic photography, in both portraiture and landscape, had deteriorated somewhat during the war, when millions of pictures were made with a military background—which claimed the maximum interest of that excited period,—happily now past. In the illustrated journals of practically every type, pictures of military interest predominated and the photographers' show-windows contained no portraits of the mere civilian—even women being fond of posing as "Red-Cross Sisters." Innumerable snapshots were made, at the various fighting-fronts, by more or less competent amateurs, many of whom had never handled a camera before the war, just as they had never before shouldered a gun. A distinctly military spirit dominated all these pictures, precision and accuracy of detail being striven for, while the pictorial side was hopelessly disregarded. The German people—and probably the whole of Europe—had been saturated with such illustrations, and had become heartily sick of them. Publishers complain that there are no books on the market which sell so poorly now as war-books. The years 1919 and 1920 have restored people to their senses.

Tired of the sensational or souvenir-picture of war-time, every camera-owner now tries to cultivate the artistic side; and the above-mentioned exhibition was evidence that we are now steering in the right direction again. The antiquated "pleasant smile" and the retouched photograph are gradually disappearing. When I visited the exhibition, last week, I was struck by portraits which had a pronounced American character. A small wall-space had, in fact, been reserved for the productions of well-known American camera-artists, which had been procured by the directors of the exhibition. I found such names as: Phillips, Philadelphia; Garo, Boston; Gerhard Sisters, St. Louis; Baker, Columbus; Harris and Ewing, and Towles, Washington; Strauss, Kansas City; Bell, New York; Moffett, Chicago; Mock, Rochester.

Some years before the war, I gave a description—in one of my "Berlin Letters"—of our so-called "Messbildanstalt"—a state-institution which, as far as I know, has no counterpart in other countries. Equipped with thoroughly



WATERFALL

CHARLES F. MARVIN, JR.

up-to-date apparatus and accessories, it makes photographs of predominantly architectural and artistic character, with absolute accuracy as to the dimensions of the pictures, which are to serve architects, sculptors, painters and handicraftsmen as patterns for the construction or designing of the objects so represented. This idea could be more effectively exploited through the creation of a state-collection of pictures.

The news has just reached me that the neighboring State of German-Austria established, in the early summer, pursuant to a cabinet-resolution, a State Photographic Bureau. The object of this institution is to assemble, at one central point, all the widely scattered photographs of an historical, architectural, topographical, scientific and ethnographical nature, including the numerous contributions made to these different departments, in various localities throughout the country. In hundreds of places—museums, photographic academies, art-institutes, libraries, State and Municipal institutions—a vast number of valuable negatives are to be found, to which, however—owing to the lack of a cataloguing-system—it is impossible to conveniently refer for the purpose of locating any special subject. An important need would be served by establishing a central depot, where these pictures could be stored, carefully classified, and listed for such varied purposes as the use of schools, academies and universities, lectures, research-work, the promotion of general hygiene and welfare, the conservation of historical landmarks, and the

like. Everyone familiar with actual present conditions, prevalent in all civilized countries, must realize how much of this wonderful photographic material remains unused, in view of the present disparaging tendencies. Negatives in the possession of public institutions require a large amount of space; and these institutions would welcome an arrangement whereby these treasures could be safely stored. Moreover, the photographic public—both amateurs and professionals—have thousands of very valuable plates, many of which are stored away without being utilized, thus representing capital without interest. Austria, although inferior to Germany in many respects, has taken a most commendable step, in a novel direction; and some of our public institutions are trying to imitate this plan. It has thus been suggested that the above-mentioned Berlin Messbildanstalt should be remodeled, to conform to Austrian lines. During the first month of its existence, the Vienna depot has collected 100,000 negatives, comprising, for the most part, views valuable by reason of their artistic, historical or ethnographical character. [Our correspondent's description of the "Messbildanstalt" and the Government Photographic Bureau should stimulate our readers to aid in the establishment, in our large cities, of similar enterprises. It is obvious that in promoting and maintaining such laudable work, the camera-clubs of the United States and every other civilized country and individuals as well, can render invaluable service. EDITOR.]

Intensifying with Chromium



AS our readers know, we do not hold with either reducing or intensifying a negative, if by any possibility it can be avoided. When once a negative has been made and is dry, it is better not to expose it to the risks of rewetting unless it is absolutely necessary. But at times this may be unavoidable.

A popular intensification-method is that in which the negative is bleached in acidified bichromate, and then darkened by redevelopment. If the original negative were thoroughly fixed and thoroughly washed to begin with, and if after the bleaching-process it is again washed until all trace of yellowness has vanished, there should be no staining. But very frequently, on putting it into the developer, yellow or brown stains make their appearance, and these it is very difficult—usually impossible—to remove.

Insufficient fixing may cause stains which show themselves only when the negative is redeveloped, and for such defects there is no remedy. Anything that would attack the stain would also attack the image. In spite of all that has been written on the subject, there still are workers who appear to consider that fixing is complete when all signs of whiteness, when the negative is viewed from the back, have vanished. It should be assumed that fixing requires the negative to be left in the hypo for at least as long again.

Another cause of stains in this process is exposure of the negative to too strong daylight during or after bleaching, and before redevelopment is complete. The moderate degree of daylight in any ordinary room should do no harm; but if the negative, during the intermediate washing, for example, is exposed to a strong light—certainly if it is exposed to sunlight—there may be trouble. At the same time, the washing should be thorough, and all trace of

yellowness should be washed out before attempting to redevelop.

It has been said that there is no need for the negative to be well washed after fixing and before bleaching; but this is a statement which it will not do to take too literally. It is true that the acidified bichromate solution will decompose any hypo that may be left; but it is itself decomposed in doing so, and unless there were a great excess of it, and ample time is given for bleaching, it is quite possible that the result of hypo left in the film would be an irregular action, giving rise to something which at least would look like a stain.

Another cause of staining in all operations which require rewetting of the negative is fingering the dry film. When a plate is developed for the first time, its surface should be quite free of finger-marks, since the importance of not touching the face of a sensitive plate is impressed upon us in almost every book of instructions. But when the negative is finished and dry, it is not usually handled so carefully, and its film side may be fingered, apparently with impunity. The result is to leave a slight, quite imperceptible, trace of greasiness, which, when we come to rewet it, leaves it repellent, so that the solutions with which it is treated do not "take" evenly. The form of many stains leaves no doubt that they are finger-marks.

All of which comes back to what we said at first: that when once a negative is dry, it is far better to select a printing-process to suit its contrasts rather than to try to modify them by after-processes.—*British Journal*.

[In justice to an American-made chromium intensifier, which has only recently been placed on the market, and which is giving admirable results, it should be stated that the writer of the above-quoted article refers undoubtedly to a product of English or German origin. **EDITOR.**]





DUCKS

ENOCH M. BARKER

Mounting Prints

ENOCH M. BARKER

TO make a selection of a mount that is appropriate for a picture necessarily involves considerable study, especially so, when the selection must be one that will display it to its best advantage, and is laid down by artistic taste. A great many landscapes with good tone-values are spoiled by inappropriate mounts.

It is not my intention to dwell to any extent on the possibilities that can be attained by the various mounting-processes shown in the market. On the contrary, my object in this issue, is to extend to the readers the benefit of my experience in mounting prints for exhibitions.

For a number of years it has been a pleasure to me to enter prints for exhibition where they usually hang on the walls from two to three weeks at a time; and it has been quite noticeable to me, that at the expiration of the time specified, many of the prints had become unsightly. Those that were pasted at the four corners, had become separated from the mounts, caused either by contraction or expansion.

Others were intact, but their appearance was gruesome, the mount having warped and the print curled on both sides, as well as on the top and bottom. I determined to overcome this difficulty—if such a thing could be done—and, after careful study, I solved the problem. At the next exhibition I had the pleasure to enter ten prints, all of which were displayed on thin, white mounts, the mounts being made of the stock that printers use on the backs of pamphlets and price-lists for catalogs. This stock can be obtained from any good wholesale paper-house.

My manner of operation is first to assemble all prints of one size, say 5 x 7 inches, and then cut the mounts 9 x 13 inches. This will leave a margin of two inches on each side and top, and four inches at the bottom. These are laid aside for a few moments, while I cut a card-mount a little less than one-eighth of an inch in thickness, and to measure $5\frac{1}{2}$ inches by $7\frac{3}{4}$ inches. I lay this cardboard on the face of the mount, being careful that it is placed directly in the center, allowing the margin at the top and sides

to be equal distance apart. I then turn the whole arrangement upside down, and lay it on a clean blotter, using care not to allow the cardboard to shift its position. Then, with a slight pressure, I run a finger around the edge of the cardboard, which is underneath the mount, to make a slight depression.

The next step is to procure one of the new style rubber stirring-rods and with it, pressing lightly, draw it around where the depression is shown, and if in my judgment the scoring is not sufficient, I repeat the operation; but during this entire process, I do not allow the card beneath the mount to shift its position, otherwise, I may spoil the embossing for which I am aiming.

The mount is now ready for the print. The next step is to place the print on the mount, which is easily done by applying paste first to the upper edge of the print and then to the mount, paying particular attention to the spacing on each side and top, and making sure that the picture is evenly centered. Then it is laid aside with a weight on it to dry. Under no consideration should the mounted prints be placed in a copying-press to ensure good pasting; for in doing so, the embossing will be destroyed.

Now comes the critical point to prevent the print or mount from curling, no matter how long

it may hang on the wall. After mounting all the prints, I take each one separately and, with a sharply pointed pencil, I make a mark on each side of the print about one-eighth of an inch above the lower edge. I then lift the bottom of the print and lay a straight rule in a direct line with the marks indicated and, with a sharp knife, cut through the mount, the cut reaching from mark to mark. The lower end of the print is then slipped through this cut. The mount is turned over and a strip of gummed tape, three-quarter to an inch wide, applied, overlapping the full length of the cut on the mount. The tape is moistened all around the *edges*, leaving the *center dry*, as the edge of the print underneath must not adhere to the tape. When the tape is dry, the print will be found to move freely in the slit.

The mounted picture is now ready for exhibition and, no matter how dry or warm the atmosphere may be, contraction may take place; but it will in no way affect the mount or print. The print may shrink or expand; but all this action is taken up or allowed for by the cut in the mount at the lower end of the print. This manner of mounting allows full freedom of the print, and, at the same time, to retain its original shape indefinitely. It has never failed me, and all I can say is, try it and be rewarded.

Push-the-Button Retouching

FREDERICK C. DAVIS



RETOUCHING is a necessary evil. The wrinkles and other seeming defects in the portrayed face are indications of character; and it is obvious that their removal impairs the impression of truth the camera should convey. However, all sitters seem to desire the flattering results of retouching. As for myself, I should never desire to present a photograph of a group of healthy freckles, with me behind them, to anyone. Retouching is its own excuse and its own benediction.

There exists in the mind of the amateur photographer who has not gone so far as to attempt to retouch, that there is something about it which requires so vast an amount of skill and dexterity, that it is useless for him to try to take it up. Portrait-negatives are avoided, because retouching is a mystery to him.

Many an otherwise good photographer has giving up retouching because, after a trial or two, he found that he couldn't remove the wart on Cousin Bill's nose to suit. I found one amateur

leaning across a window-sill two feet wide, holding a film-negative against the window with one hand, and working with a pencil with the other. But he sighed and gave it up. He said he couldn't retouch!

There are only three things necessary to learn to retouch, and those are, first, the tools of the trade; second, patience, and third, some knowledge of the structure of the human face. No one can even dig a hole properly without the proper tools, and so a photographer cannot hope to retouch successfully without a good desk, a good light, and the few good pencils, fluids and etching-knives necessary. An hour's practice of the right sort a day, for two weeks, should give him full control of his implements and ability to retouch satisfactorily—provided he realizes that the human face does not resemble one side of a billiard-ball.

Now the amateur who cannot retouch has seemingly found his salvation. There have appeared on the market, during the last several years, devices which are supposed to do away

with all retouching, or, at any rate, to make the time required very short and the necessary skill very slight.

A typical instrument of the lightning-variety is an electric retoucher manufactured by a certain American firm. It is claimed that this instrument will retouch a negative perfectly in approximately fifteen minutes—removing all defects and producing an incomparable stipple. The sample photograph submitted with literature shows that the maker of this instrument does not himself understand proper retouching, for the photograph was so over-retouched, that the skin looked colorless and stretched until it pained my eyes to look at it. The cost of about thirty dollars for this machine makes it prohibitive to most amateurs. However, a few who had given up hope have presumably bought instruments, for the firm seems to flourish. The instrument, briefly, is an ordinary feed-pencil with an electrical attachment which vibrates the lead so as to produce a stipple effect on the negative. It is by far the most useful machine of its type, however, and if it were used by one who understands what too much and not enough retouching is, it could produce good results.

Still another type of this apparatus is a certain Artosomething screen. From the advertisements, I infer that it is some sort of something (the advertisements do not state what) that is to be placed between the negative and paper, when printing, so as to produce a stipple "which cannot be equaled by the most expert retoucher"—and one hundred dollars says it cannot!

What a machine of this type could do is not at once clear. However, some good things do happen once in a while, and it is not for anyone human to throw aside something which will produce as good results with less work than a method in use. So I eagerly sent six simple, civil, polite questions to the manufacturers. The questions were such that any photographer would like to have answered before investing the profit from a dozen photographs in the "screen." Here they are:

"Is the object of the screen to eliminate all retouching, or merely to make the greater portion unnecessary?"

"If any retouching is necessary, will it require any great amount of skill?"

"Does the screen stipple the whole print, or just the face, neck, etc.?"

"How long will the screen last?"

"Does it require longer to print with the screen than without?"

"Does it block up the highlights or lose the detail in the shadows?"

With that letter I sent a request for one print

made without the screen and one of the same negative made with the screen, paying all cost of same.

Imagine my surprise upon receiving my letter back the next week, with a scrawling and almost illegible hand at the bottom stating, curtly, that they had no time to answer the questions, so they were sending back the money. You may judge, for yourself, how good such a product would be, if the manufacturer himself declines to answer a few civil and common-sense questions about their product which they could have placed on a good, honest, firm basis. Instead, they demurred from upholding or defending their product in any way!

Anyone can infer from the returned letter, therefore, that this screen does not do away with all retouching, but just a slight and trifling amount; that just as much skill in retouching is needed with the screen as is needed without; that the screen "stipples" the *whole* print, which is highly objectionable, destroying fine gradations and detail; that the life of the screen is short, which makes it expensive; that it requires longer to print with the screen than without, which is a loss of valuable time; and that the screen blocks up the highlights and loses the detail in the shadows!

Anyone with the slightest amount of intelligence will see that anything inserted between the negative and paper will make the resulting print lose its sharpness, its detail and fine shadings. This will, of course, blur the print to a degree that the defects of the negative are naturally covered up by the blending or blurring, and will produce a false soft-focus effect which is not at all desirable or artistic, and which will smear the shadows and highlights together in a ghastly, unnatural manner.

The makers of this screen also say that great softness may be had with the use of it by inserting one or more sheets of *pink* celluloid between the negative, or screen and paper. The very color of the celluloid makes the exposure so long, that the time wasted becomes of grave account. Why *pink* celluloid is used and what special advantage that color has over any other, or any at all, is neither specified nor clear. A sheet of ordinary glass, at one-fiftieth the cost of the screen, will perhaps produce the same, and, no doubt, equally artistic results.

It is for the benefit of the photographer that I tell him this. And I trust that he will keep his eyes peeled for any such devices which are claimed to do away with such a great amount of work, and produce artistic and individual results mechanically. Every face requires its separate and distinct form of retouching; a



THE CRYSTAL-LENS GIRL
VICTOR DARNELL

fine or medium or coarse stipple, a little more here, a little less there; and it is self-evident that, certainly, no mechanical appliance can eradicate the characteristic blemishes, and blend the distinguishing lights and shades.

Moreover, what is a photographer who cannot retouch? What is a painter who cannot mix his colors? Any studio-photographer who resorts to the use of an automatic machine, to produce his retouching, is not worthy of the name of photographer. He belongs in the same class as the "push-the-button" amateur, and so we will call him the "push-the-button" retoucher. For a photographer who cannot retouch, is no more a photographer than a person who cannot shape clay is a sculptor. A photographer who uses such instruments for his work is no more a photographer than the merest amateur, who snaps his shutter and lets the professional finish his pictures for him, is a photographer.

When some genius invents something that will do this work just as well as expert ability does it, and which will adapt itself to each in-

dividual negative, bringing out the desirable, suppressing the undesirable, and when it is under the guidance of a hand not so expert, I shall be one of the first studio photographers eager to get one. And, also, by then, surely, someone will have invented an appliance to affix to the shutter which will automatically calculate and give the correct exposure for the particular conditions before the lens—and at the most opportune time a device which will keep the lens focused constantly on the main object, regardless of its motion; a contrivance that will develop, wash, fix and dry the sensitive plate automatically; a machine that will do all printing-operations at the pressure of a button; a machine to arrange the sitter in his most characteristic pose; another implement for placing the light at the right place and angle without human direction. And just as surely, I will have them all.

But, we won't live long enough to wait for these things to be invented! What's the use!

It is too far, far away!

Sky and Air (Printing-In of Clouds)

MAX SCHIEL



HE distance and the sky are important parts in a landscape-view; but their artistic reproduction in a photograph is accomplished with difficulty. The correct representation of the atmospheric effect, or aerial perspective, is extremely important, for in it often lies the principal total effect of the landscape. An observing person knows, for instance, the various color-tones of the distance. From deep blue to the tenderest gray or silvery sheen, innumerable shadings may be noticed. Does not the beauty of many landscapes lie just in that? How does photography act in the reproduction of such tone-values? Here we are confronted by a difficulty which is not easy to overcome—even by advanced workers; but the artistic composition of the picture demands the attempt, and repeated practice will lead to the goal.

With the ordinary plates formerly employed, it was difficult to reproduce the sky otherwise than as a flat, white surface, and the distance was often entirely lost. Such pictures were far from giving a natural impression and could not be satisfying. Then, when the orthochromatic

plate came into general use, it was a great step in advance. Later, work with yellow filters of various degrees of clearness has brought us very near to our ideals.

The ordinary silver-bromide plate does not reproduce the natural tone-values and, therefore, is scarcely ever used at present for landscape-views. But even the best orthochromatic plates require the use of a yellow filter to obtain a correct rendition of tone-values. Yet the use of this auxiliary should often be omitted—as when making instantaneous views, in order to give the plate as nearly correct exposure as possible; for with the yellow filter there is a corresponding lengthening of exposure that is not always permissible with such views, so that with good light a very weak filter is selected that will not more than double the time of exposure. *The correct exposure is, however, necessary in every case and cannot be exchanged for other advantages.* Moreover, if, for instance, the distance in a landscape shimmers in blue tones, a too strong yellow filter would neutralize the aerial perspective. The picture would then appear unnatural, and that would be, on account



UPPER POTOMAC

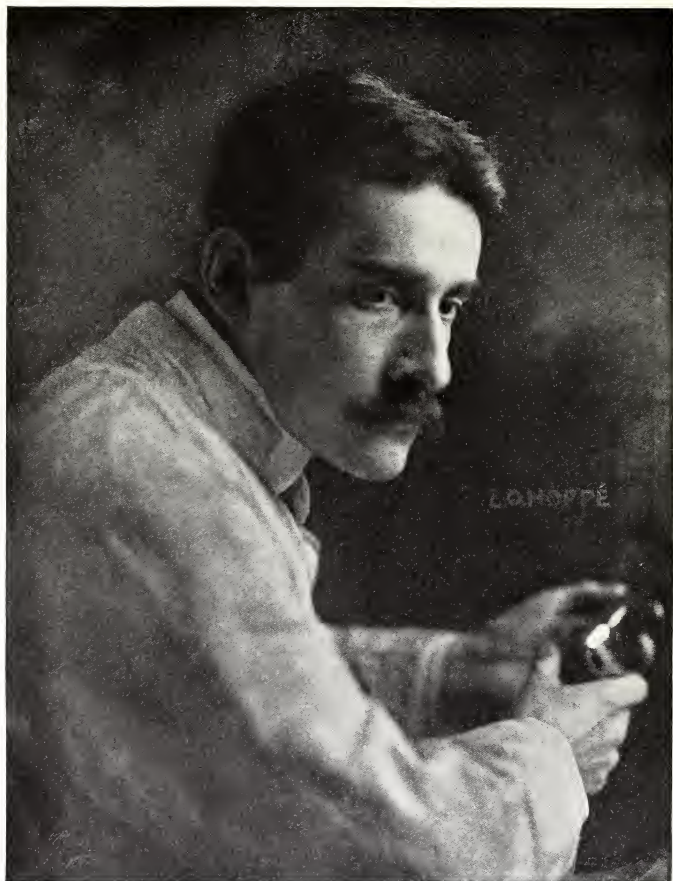
DR. C. M. MANSFIELD

of the lack of depth, the same thing as inartistic. At another time, the distance is wrapped in a gray mist, while high over the horizon the blue sky with delicate clouds shows itself. To reproduce such atmospheric effects is hardly possible, even with an orthochromatic plate and a yellow filter. In all such cases, it is advisable above all to endeavor to get a negative as nearly normal as possible, and later, when working up the picture, try to improve the rendition of the distance and the sky, if necessary even by printing-in some clouds from a second negative.

Often the clouds are quite visible in the negative, but are so dense in relation to the landscape that they print only very faintly. In order to print such a negative with the clouds and landscape in the desired gradation of tone, the simplest way is—after the landscape is printed to the proper depth—to cover it with a mask conforming to its outlines, and to print the sky to the desired tone. This must be done in diffused light in order to adjust the landscape properly to the sky. Covering the glass-side of the negative with a dull varnish or red coloring is also a good way to change the tone. The varnish is scraped with a knife from those parts that are to be printed darker. The sky may also be reduced by applying the reducer with a brush or wad of cotton to the moist negative, which must

be hardened again, otherwise there is danger of injuring the film. In general, however, the partial reduction of a negative in this way is not to be recommended, as the reducer may be too strong and the work unevenly done. Whoever has had experience with ammonium persulphate reducer can, by its help, make a good printable negative. Although these expedients are often capable of improving the working of a negative, it should always be borne in mind that they are only makeshifts and cannot take the place of a faultless negative.

In order to print the sky longer than the landscape, another expedient may also be employed, viz., a gray screen of diminishing density, which the amateur can make himself. It can be used with equal advantage in printing and enlarging by placing it over the negative so that the darker gray portion will cover the landscape. To prepare this screen, a diapositive plate (transparency) should be used, covering it entirely with a piece of cardboard and slowly drawing it off to one side—or to one end, if for a vertical view. In this way, the side of the plate first uncovered will be exposed longest, whereas the last sides uncovered will be only slightly darkened. After developing, fixing, washing and drying, the screen will be ready for much good, practical use. It should be kept safely in an envelope.



E. O. HOPPÉ, F.R.P.S.
R. DÜHRKOOP



The printing-in of clouds is simpler than would appear from the description. After a few trials, any one can do it successfully. For this, of course, cloud-negatives are necessary, and one should have a large number of them so as to be able to select one that will harmonize best with the view in hand. On account of varying illumination, it is well to have the cloud-negatives taken in all directions. Clouds and landscapes must harmonize in all respects, and the printed-in clouds must not have the least unnatural or artificial appearance.

A flat orthochromatic film is the best thing to use for making the cloud-negative. It can be printed from either side and thus gives a better chance to fit the clouds to the landscape. The next best is the non-halation orthochromatic plate; but films are better and simpler to handle when printing for diapositives, and they can also be used to make enlarged negatives, and, therefore, should be given the preference. Both film and plate should be exposed with a yellow filter, but not too dark—one that will require at most double the normal exposure. This should be a little shorter than for a landscape—three times less should be abundant, the sky is so much lighter; but if the exposure is too short, there will be too much contrast and the light-effect would be lost. The camera should not be focused too sharply on the clouds. In most of our views, we do not focus on infinity, but rather on the nearer middle distance, to produce a slight diffusion for better working. It would have an unnatural effect to print sharply focused clouds in such a picture. The lens should therefore not be stopped down, or at most a very little—let us say to $F/12$. In printing with the help of such a cloud-negative, one should proceed as follows:

In making a direct copy, the landscape is printed as usual, the sky remaining white. In order to print the clouds in, the cloud-negative is placed in contact with the still sensitive paper, bringing the line of the horizon as nearly as possible to that of the cloud-negative, but not overlapping, as it would look unnatural to have clouds near the horizon that belong higher up. Clouds are subject to the same laws of perspective as the landscape itself; the negative will therefore project more or less above the paper, and it will be necessary to use a larger printing-frame with a glass-plate. A mask cut fairly to the contours of the landscape covers the part already printed. In order that there may be no visible contours, the sky is usually printed fading away towards the horizon. This can be done best, by laying a folded pocket-handkerchief across the printing-frame in a position corre-

sponding to the contour, thus forming an excellent vignette.

In the enlarging apparatus, the clouds are not so easily handled because the bromide paper is not printed visibly (previous remarks, of course, refer to printing-out paper). For direct bromide enlargements, it is best to make a new plate from printing-out print; this is prepared as above described, reproduced and then enlarged. On the other hand, printing clouds in a diapositive is quite simple, and from this an enlarged negative can be made directly. The mode of operation is as follows: Clouds and landscape are copied on two different plates which are placed together face to face. The printing-frame is so arranged that on the unexposed diapositive plate the cloud-negative—in this case only a film can be used—is laid, and over it the diapositive as a mask. After exposing, developing and fixing, we have a diapositive plate (transparency) on which the clouds with the sharp contour of the landscape are printed. For this, however, a negative with a dense sky is necessary. In case some parts of the landscape have been printed on the cloud-plate, they can be removed with a brush moistened with reducer. Place the two diapositives together so that the contours register exactly, and then fasten them together.

May the suggestions, here made, help to obtain a more natural and artistic reproduction of the sky! But it should be kept clearly in mind that an incorrect working up of the picture does it more harm than good, and it requires a careful study and counterbalancing of the tone-values of the sky and landscape. It is only too easy for the beginner to fall into the error of overdoing the work when printing-in the clouds. Against that we would expressly warn him. One often sees pictures with the sky much too heavy. For the moment they seem to be very impressive; but on comparing them with the tone-values of the landscape, it will be quickly recognized how unnatural they are. Artists and photo-pictorialists have proved that it is possible to depict the grandeur of Nature truthfully and beautifully with brush and lens. In Nature the camerist has an inexhaustible source of subject-material. Let us take Nature for our model, and study and strive to depict her correctly.—*Wiener Mittheilungen*.



FINE feathers do not make fine birds, nor is an elaborately printed brochure with enticing inducements evidence of a sterling school of photography. Take a peep under the feathers.

The Light Darkroom



THE average darkroom worker spends a large part of his life in a crepuscular atmosphere that is detrimental to health, temper and eyesight. This is not at all necessary, as, with the exception of panchromatic work, a more reasonable light can be maintained with many advantages and without undue risk. With panchromatic emulsions it is best to work in absolute darkness, which at least does not cause eyestrain. But the major part of darkroom-work is not panchromatic, and quite impracticable in darkness.

I have in mind at the moment two darkrooms which are engaged on negative development. Their outputs are similar in character and quality. One is illuminated by two 16-c.p. lamps, each screened by two thicknesses of ruby and one of orange glass. The walls and ceiling are stained dead black. The other room is lit by two 30-c.p. lamps, screened by globes of what I believe is called "copper" glass and one Wratten green safelight. The walls and ceiling are white. I don't know that fogging has occurred in either room; if it ever did, it would most likely be in the darker room, where the lamps have to be in close proximity to the plates and films to be of any use. Now these rooms handle the same class of emulsions and turn out a similar quality of work; but here the similarity ends. The lighter room, though no larger or better equipped, does twice the amount of work, and with much less strain on the workers; those of the darker one, although situated in more healthy surroundings, suffering more from fatigue and eyestrain.

I spend some hours per day in a room which is an office, store, enlarging and copying room combined. I am frequently visited by clerks and craftsmen of different (non-photographic) trades, who consider this room too dark altogether for any one to work in. And yet it is the lightest darkroom I ever saw or heard of. It would certainly cause panic to workers of the crepuscular order. The main illumination is supplied by a 32-c.p. lamp in a pale-amber globe, hung high above the enlarging-bench and immediately beneath the white ceiling. Although the room is large, this light makes it possible to move about rapidly without collisions, and to find things without hurting one's eyeballs or losing one's temper. Above the desk is another 32-c.p. lamp in a metal shade, which cuts all direct rays from the enlarging-bench and the copying-cascl. It is so hung that it illuminates the desk and stock-shelves, this arrangement allowing things to be done without holding up

enlarging-work and putting away bromide paper. The copying-lamps are arranged to illuminate the board only, so that, if necessary, a copy can be made while enlarging is going on. There is also a retouching-desk in the room; but, as no direct light can emerge from it, it is considered quite safe. A drying cupboard carries two radiator-lamps; but here, again, direct light is kept inside. The walls are pale green, dotted here and there with pictures and colored advertisements, to which a later reference will be made. Developing is done in an adjoining room, the arrangement of the bench and dishes being such that no direct light can touch them from the outside room when the door is open. This obviates the necessity of ever shutting the door, which is a relief in itself and a means of ventilation. The illumination in the small room is supplied by three 20-c.p. lamps. One, in an amber glass-fronted box, is fixed at one side of the developing-dish—a much better place than facing the worker, where it would cause eyestrain: it's the dish we wish to see, not the lamp or its reflection, in the developer. Another is hung over the fixing-dish, surrounded by a bottomless tube of yellow fabric, which allows a circle of white light to fall on the dish. The third is an uncovered lamp for occasional use only. The developing-lamp can be converted to red for plates, when the fixing-lamp is dispensed with. The door, however, is not shut unless very sensitive emulsions are being handled, as I find no detriment in having a little *reflected* yellow light in the room. The walls of this room are white, and easily worked shutters in both rooms allow an immediate supply of daylight. It may be asked, of what use are the pictures and colored advertisements? They provide a pleasant and healthy stimulus when the light goes up after a long spell in the yellow illumination, the extent of which cannot be realized until experienced.

Now I am not going to say that the darkroom I have described is fool-proof, nor that an apprentice could be put to use ultra-rapid bromide paper in it, and I will admit that the yellow lamps would not do very well in a spectroscopic test for actinic rays. At the same time, there is ample safety for intelligent workmanship, and, as a matter of fact, fog is an unknown bogey so far as the workers in that room are concerned. To come to concrete facts, Illingworth's bromide papers are used without any special care, and do not suffer from the full yellow light or the reflected white light. Kodak's rapid papers are handled more circumspectly, their exposure to the direct yellow light being minimized and

the desk-light being switched off when they are unwrapped. Enlarged negatives are made on "ordinary" plates with the same precautions. To show how safe a comfortable yellow light can be at ten feet from an emulsion, I have made a transparency on the enlarging-casel, using a special rapid plate, and "got away with it," as they say in America, but this was purely an experiment, and I would not advise such methods for general practice.

Users of papers slower than bromide might adopt even fuller illumination without undue

risk, one of the beauties of these papers being their great adaptability to comfortable conditions. I know a gaslight printing-room doing 4,000 to 5,000 a day, where the general illumination is as good as is found in many dwelling-houses, and daylight streams unhindered through the ventilators and the ever-open door. Light used intelligently, helps one to keep cheerful and healthy. Being compelled to work in twilight or semi-darkness causes irritability, loss of health and ultimate waste.

THERMIT, in *The British Journal*.

A Miracle Photographic

E. B. WHITING

IN the good, old days when photographers used tripods, the more progressive had devices by which they could make a picture by pointing the nose of their camera straight down for a vertical picture of something from above. Stunts, like this, are difficult

book on a chair, should come right opposite the center of a mirror hung at 45° from the back of another chair on whose seat rests the object you desire to perpetuate, plainly in a quasi-horizontal plane.

Give a shade more exposure than usual, and the rest is easy. Figure the focus as the sum of



FIGURE 1



FIGURE 2

these days. Let us suppose that you want a tip-top view of a turtle, or a nice little bug crawling on a sheet of your best white note paper. Take your creeping beastie, snow crystal, hail-stone, sleeping baby or what not, and use a mirror as shown in the photograph. The better the mirror, the better the picture—all other things being equal—which is seldom the case in photography.

A hand-camera, set horizontally on a large

the distance to the center of the mirror to the lens and also from the object that is sitting for its portrait.

It was an exceedingly hot day when the accompanying turtle posed so nicely. He would have taken a better portrait without any water in the pan. Water gives reflections, refractions and distractions; but, at least, Mr. Turtle was cool and comfortable, which is more than can be said of the artist.

New York Camera Club Exhibition

FLOYD VAIL, F.R.P.S.



FROM the first of the year, the Camera Club of New York has been unusually conspicuous in its pictorial activities and its efforts to advance the interests of artistic photography. Every month, there has been held in the galleries of the club a one-man show, as announced in PHOTO-ERA, from time to time. But August was reserved for a members' exhibition. The display, as might have been expected of such an old and flourishing organization that embraces many well-known and skilled pictorialists, was of very high quality and excellence. Nearly two hundred prints were hung, and the number of contributing members was large. The attendance was all that could be desired, and the press of New York featured it by criticisms and reproductions.

Unlike former exhibitions of this club, the landscapes and marines were not plentiful. Figure-studies and portraiture predominated. This is strange, as painters state that there is not much demand for, or interest in, the former at present; but landscapes are bought, sometimes, before they are finished by the artist.

That old-time exhibitor, W. E. Wilmerding, showed three landscapes, all in his usual excellent vein; and those of H. Galapeau combined, as formerly, with invariable interest, much feeling and textural excellence. H. D. Bernstein likewise contributed three that were worthy of that artist. Thomas Wilfred's single example in that class was rendered in a broad, soft effect and was very fetching. I must not omit to commend the work of H. Sugimoto, Allan Chamberlain and Floyd E. Vail, especially the latter's "Ripples."

J. W. Allison offered some interesting and finely rendered street-scenes and architectural subjects obtained in foreign countries—principally in Germany before the war. However, the print of his that attracted the most attention was a beach-view, with a nude figure, which was very skillfully presented.

Sparks Freeman was represented by an unusually charming silhouette and a genre. Thomas Wilfred's figure-study of a partly nude child was among the best things in the exhibition. H. A. Latimer, of Boston, Massachusetts, sent ten gum-prints; and Miss Helen M. Murdock, also of Boston, was particularly happy in her two Hindu characterizations. J. B. Tarbell, one of the oldest members, scored with a buffalo-head, in which the pattern was most attractive.

Secretary M. W. Tingley's nude was conspicuous for its rendering of contours and flesh-texture. His "Portrait" also ranked high.

There were offered portraits of distinction by Ned Van Buren, the famous motion-picture camerist—especially his seven screen-stars. One of the works of this class has been reproduced by PHOTO-ERA and appears in this issue. It was made in the club-studio by Floyd E. Vail. Other good work was that shown by H. P. David, E. R. Morton, T. B. Temple, F. Guillard, N. C. Owen and Miss Lorraine Harding. George M. Kessler, of Syracuse, N.Y., exhibited twelve or more, some of which were very striking and two or three admirable; but he would have appeared to better advantage had he softened and subdued the distracting passages in which he seems to delight; for some of his portraits are out of values, obtrusive and lacking in tonal harmony. His modeling, poses and character-rendering are good; and it is very unfortunate that he sometimes spoils his effects by introducing whimsical features. That he is capable of producing extremely artistic results is evidenced by his eight toneful and first-class cover-designs.

R. A. Warrender was very effective alike in landscape, marines and harbor-scenes. Six of his prints were among the best in the exhibition. R. W. Burke's best figure-studies were "Bill," "Picaroon" and "Gara Zorn." Miss Esta Varez showed two delightful figure-compositions and two portraits that were quite outstanding. Ben J. Luboschez contributed some fine examples of architecture. Of Edward Heim's four pictures, the best was a seascape.

Dr. Degenhardt was most successful in his several street-scenes. Dr. Kreuder's three character-studies sustained his reputation in that field of art.

José Luis Réquena, of Mexico, was unapproached in his genre-studies in carbon—thirteen of them. Leonard M. Davis, the painter, was unique in his display of fireworks and night river-views. George W. Stephenson was most happy in his "Night on Lake George" and "Dawn on Washington's Monument."

Sergt. J. J. Swain's war-picture, made under fire, faultless in composition and altogether very unusual and striking, deservedly awakened as much interest as anything in the collection.

As a whole, this exhibition surpassed any of its kind given by the members in recent years, and was well up to the standard that has always been set by the Camera Club.



FLOYD VAIL, F.R.P.S.
FLOYD E. VAIL

An Apartment-Dweller's Hobby

A. J. VOORHEES



MOST amateur photographers would like to do their own developing and printing; but many, and especially those who live in city-apartments, believe they haven't the room. Being an apartment-dweller myself and, likewise, a camera enthusiast, I gradually planned and equipped a darkroom—all the equipment being portable and, when not in use, easily stored in an apartment clothes-closet. No doubt, many readers of this magazine have similarly equipped their homes, but possibly this article may encourage a few to make a start for themselves, and doing their own work is most of the pleasure derived from the practice of photography.

Darkroom

First select a room where there is running water. If there are two, use the one more easily darkened. In my case this was the bathroom, it having one window and a glass-paneled door. I took two discarded shade-rollers and cut them the proper length for door and window. The shade for window I made full width from outside of casing on one side to outside of casing on the other; for the door, nearly full width of door to fully cover the glass. To prevent light coming between the shades and woodwork of door and window, I put L-shaped screw-hooks along the edge of shades on both door and window-frame, spaced about eight inches apart. After shades are pulled down, turn these over the edge and they will hold shades securely. I also put one of these on bottom of window-sill, and one on door for the small shade-ring to hook on—to keep the shades fastened down securely. I had a shade-maker make me two red, opaque shades the proper size; but I put them on the rollers.

Work-Table

My next requirement was a work-table. See sketches II and III. This I designed to lay on top of bathtub, and made it from several boards 30 inches long taken from a small packing-case, nailing them to strips 1 x 2 inches. These strips I made the full width of tub. To keep table from slipping in the tub, I put a block 2 inches square, 1 inch thick on under side of 2-inch strip mentioned at the proper distance to just fit inside of tub.

Darkroom-Lamp—Printing-Machine

Having electricity, I decided to make a printing-machine and lamp combined. This I made

from 1-2 inch boards, two old printing-frames 4 x 5 and 8 x 10, two pieces 6½ x 10 inches for ends, two pieces 10 x 10 inches for front and back, and one piece 7½ x 10 inches for bottom. The top I made from the back of the 8 x 10 frame. See sketch IV. Take the old back and remove the springs. Then trim 1-4 inch from each side, leaving it 7½ x 10 inches. Then carefully saw 1 1-2 inches off of large end of frame and rejoin same with the hinges from the 4 x 5 frame. If surface of 8 x 10 back is worn, cover with fresh piece of felt, or baize. With a hack-saw cut 2 inches from the tip end of large springs from 8 x 10 frame and drill two counter-sunk holes in each of these four pieces and put them in center of the two larger parts of back for bearing surfaces for the 4 x 5 springs.

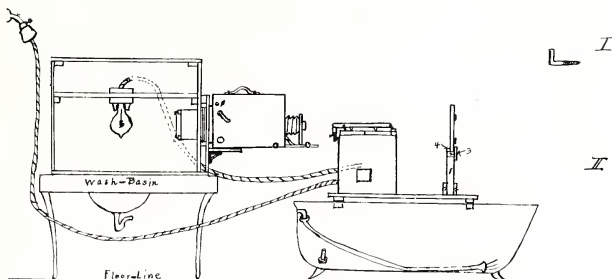
Now cut a rectangular hole (sketch V) 3 x 4 inches in front piece. On the inside enlarge this to 4 x 5 inches to a depth of 1-4 inch, and in this fit a piece of ruby (copper-flashed) and orange glass. Fasten these in with small brads or glazier's zincs.

In wiring, I used a cheap three-way switch (sketch VI) attaching to left-hand end of box. Bore small hole in left-hand end of box near bottom for entrance of main wire (1a) and four small holes for entrance of wires 2, 3 and 4 from switch. Get three keyless porcelain-sockets, two for the printing-lights marked *W*, and one for darkroom-light, marked *R* (sketches VII and IX). For printing-lights, I used 25 Watt Mazda all frosted and for darkroom lamp an 8 c. p. filament-lamp. To prevent any white light leaking through joints of box, I covered 8 c. p. lamp with red paper that is wrapped around portrait-films. Put two of sockets on back of box as close to the bottom as possible, and yet permit insertion of new lamps, when necessary. In the back of the box, about half way up, I fitted the metal parts of a knife-blade Hubbel socket for connection to my enlarging-apparatus. Wire as shown in sketch VII with rubber-covered or insulated wire. It is easier to do this wiring with only the ends, bottom and back fastened together or before putting on front. Remove the flat strips from face of the 8 x 10 frame. These answer nicely for the support of the glass for the top of printing-box. If made as described, the inside measurements of the box will be 6½ x 8½ inches. Cut the flat strips referred to, two 8 1-2 inches long and two 6 1-4 inches long and fasten these to inside of box just far enough below top to bring the surface of the glass even with top

of box. See sketch VIII. I use groundglass which softens the printing and put the smooth side up for easy cleaning.

Now fasten the $7\frac{1}{2} \times 10$ inch back in position by two screws through the 1 1-2 inch piece to the right-hand end of box. Take heavy side-piece of 8 x 10 frame to use for bearing stick for top of box, attaching springs from the 4 x 5 frame to under-side of stick so they bear on the bearing plates mentioned above. Sketches IV and V. Bevel the right-hand end of bearing-stick and attach a small hinge. Attach other side of hinge to right-hand end of box, first placing a small piece of flat strip from 8 x 10 frame under the hinge to bring bearing-stick more on a level.

removed at will for adjustment of light. This can be done by placing a cleat at each end. Now cut two pieces 4 inches square and 1 inch thick for lamp-block; one piece 2 x 4 inches, 1 inch thick for lamp-block; two pieces 1 inch square, 16 inches long for track for lamp-block; two pieces 1 inch square, 4 inches long for support for track. Place the 2 x 4 inch piece in between the 4 x 4 pieces, and fasten with two long screws or long, slim nails. This makes a block with a groove on each side 1 inch wide and 1 inch deep. Obtain another keyless porcelain-socket and attach to center of block. Connect wire to socket and run through back of box and put Hubbel knife-blade plug on end of wire for connection to



FIGURES I AND II

Get a small snap-catch from the hardware store. Put small piece of 8 x 10 frame on under side of left-hand end of bearing-stick and attach the catch to this. Get a piece of small chain, about 1 1-4 inches long and fasten to left-hand end of bearing-stick and top of box by means of small screw-eyes or very small staples, so that when the bearing-stick is lifted, it will pick up the top of box with it.

Enlarging-Machine

My first enlarging-machine I made of wood; but later I made it out of tin, with aid of a tinsmith. I will describe only the wooden box—it being simpler to make and, if any reader wishes to make his machine of tin, I shall be glad personally to send him directions for the tin affair.

Make a box about 10 inches wide, 16 inches long and 12 inches high. Sketches II and III. Have bottom-board 17 inches long so that it will extend for attaching board supporting camera used for enlarging. Make the cover so it can be

printing-machine socket shown connected to wires 1b and 4a. For my light, I use a 200-watt concentrated filament lamp and I enlarge normal $3\frac{1}{4} \times 4\frac{1}{4}$ negatives on Artura Carbon Black in 15 to 20 seconds with 7-inch lens at F/4.5.

I use a 6-inch condensor mounted in metal. Cut a hole $3\frac{1}{4} \times 4\frac{1}{4}$ in right-hand end of box, horizontally, so lower edge of hole is about 4 inches from bottom of box. Build a square box or frame of 1-2 inch material just large enough to receive the condensor (about 6 1-8 inches square inside by 3 1-2 inches deep) and fasten this inside of large box, from the outside by means of screws, so that center of condensor will be directly back of center of hole. To keep condensor from falling from this small box, fasten narrow strip about 5-8 inches wide to top and bottom of box. If you wish to diffuse the light more evenly, use a ground glass 6 x 6 inches and fasten back of condensor by means of three of the L-shaped screw-hooks, two at bottom of condensor-box and one at top.

Now put up lamp-track by fastening one of the 1 x 1 x 4 inch pieces at each end of box at the proper height to bring the center of filament of lamp when in position directly back of center of condensor. This is important; because, if it is not in proper position, it will not illuminate your negative evenly. Before fastening track, of course slip the tracks in the grooves on each side of lamp-block and then fasten in position. Sketch X. As my largest negative is $3\frac{1}{4} \times 4\frac{1}{4}$, I use a lantern-slide carrier for a negative-carrier. If plates or films are larger, use a larger condensor and make a carrier to suit. Fasten the carrier

this support from two pieces 1 x 2 inch, 8 inches long, for uprights, marked 1 in sketch II; three pieces 1 x 2 inch, 10 inches long, for top and bottom, marked 2; one piece $\frac{1}{2} \times 2$ inch, 10 inches long, for back support of frame, marked 3; one piece $\frac{1}{2} \times \frac{1}{2}$ inch, 10 inches long, for front support of frame, marked 4. I have lines marked across my table every few inches to tell when easel-support is parallel with negative.

In adjusting the light for enlarging, focus negative on easel until you get proper size for enlargement; then push the open frame of the carrier in front of the condensor so the light will

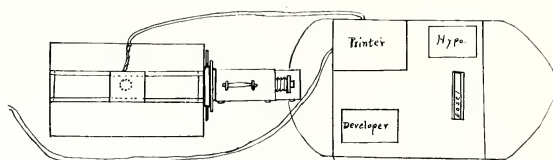


FIGURE III

to front of box, so that opening in carrier and opening of box will be true with each other. Now, cut a board about 6 x 9 inches and about 1-4 inch thick for camera-support, and fasten to extension of bottom-board and at the top to the top of carrier-frame or put a strip in between the 1-4 inch piece and the box, and fasten in place with screws—first cutting an opening $3\frac{1}{4} \times 4\frac{1}{4}$ opposite the opening in carrier.

I use my $3\frac{1}{4} \times 4\frac{1}{4}$ R. B. Auto Graflex for enlarging. I made a frame $3\frac{1}{4} \times 4\frac{1}{4}$ inches on inside, about 3-4 inch thick or deep, and on the outside the same size as a Graflex plateholder, and cut a groove in top and bottom just the same as in the plateholder for metal slide of camera to fasten to. Attach this frame to the 1-4 inch board. As it would be too much strain on the camera to have it hang from this frame, I put a small shelf 4 x $6\frac{1}{2}$ inches under this frame, supported by a small metal bracket underneath and covered the top of this shelf with felt to protect camera.

For an easel, I used another 8 x 10 frame. I enlarge only up to 8 x 10. If you wish to make greater enlargement, use larger frame. As my enlarging-apparatus sets on my wash-basin, which is about 8 inches higher than the table on the tub, I had to make a support for the frame to bring center of frame on a line with center of lens, negative, condensor and light. I made

shine directly on the easel. Move lamp either forward or backward until it gives a clear light all over the easel, and not cloudy or dim at the corners. With other style of cameras, the block for attaching same to the enlarger would have to be made to suit.

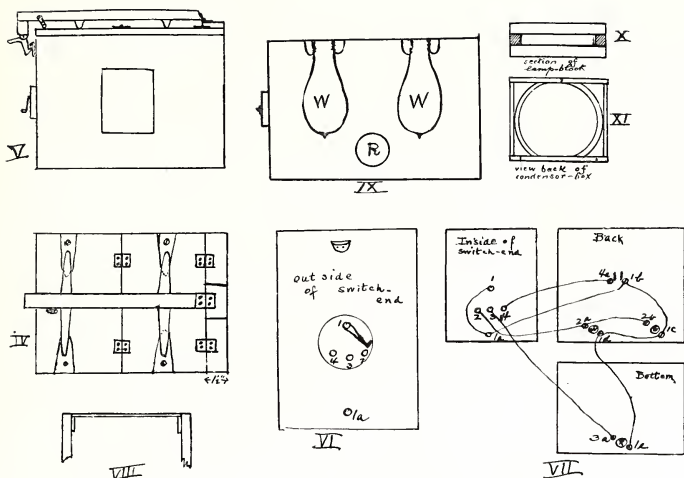
Projector and Screen

I have a 7-inch projection-lens fitted to a lens-board for the Graflex, and, at a distance of about ten feet, I obtain enlargements of my lantern-slides on the screen up to about 33 x 42 inches.

For the screen, I used a discarded light-yellow or cream-colored, opaque office-shade. I cut off the lower or soiled part of the shade, leaving a piece on the roller about 36 x 45 inches. I put in a new hem, put back the flat stick and attached a screw-eye to each end of the stick. This screen I hang up where desired and the weight of the metal roller to which the shade is attached keeps the screen smooth, and the cream color of the screen gives a fine effect to the slides. This makes a screen that rolls up to small dimensions without creases or wrinkles.

Washing Prints and Films

For washing, I obtained a plain rubber-stopper, cut a half-inch hole in it and put in a brass tube $\frac{1}{2} \times 3$ inches. This I placed in the drain of the tub. I now attached the shower-spray



FIGURES IV TO X

tube to faucet, placed the spray-end at the right-hand end of tub and turned on the cold water. This keeps up a constant circulation and a depth of 3 inches.

As already intimated, this work was not all done at one time. I made one article at a time and afterward made some improvements; but the apparatus, as here described, is the final result with the exception of the enlarging-machine.



Temperature, Detail and Density

NOW that the colder days are upon us, the worker will do well to look to the temperature of his solutions, neglect of which is a common, if unsuspected, cause of trouble. Some time ago, we were consulted as to some negatives which had all the indications of underexposure. They were very thin. Upon examination it was found that there was abundant shadow-detail, which gave the lie to this supposition. It was discovered subsequently that the developer was kept as a stock-solution in a cold darkroom and, when used, was doubtless much below its normal temperature, thus producing the weak negatives. With some formulæ, a low temperature causes

the solution to become almost inactive, and the negatives will be found to lack detail and density. Those who develop by the time and temperature method, know that development at a higher temperature will give negatives of more pluck, than those given a longer time with a colder solution. In order to overcome the general lack of contrast in winter-negatives, it is a good plan to warm the developer up to say 75° F., if the plates employed will stand it without frilling; though if the fixing-bath—which is likely to be colder than the developer—is treated in the same way, the danger of frilling is largely eliminated. With some brands of plates, there is a tendency towards chemical fog, but a few drops of ten per cent bromide solution will prevent this. Much of the same may be said of development-papers. We know of one brand that will never give satisfactory results if the developing-solution is less than 50° F.; but most workers give very little attention to such matters when developing bromide prints. Trouble in this respect is the more likely to be met during the early autumn, before the darkroom is properly warmed, as it should be during the winter, a reminder which perhaps will suggest an explanation of failures at the present time.

The British Journal.

Ins and Outs with Plates

WILLIAM UNDERWOOD



SOMETIMES, when developing a plate, the developer is not flown as evenly over the plate as it ought to be and the result is developing-marks either in the form of lines or bubbles. Even the most careful of darkroom-workers will at times have trouble of this kind. In my experience, I have found that when such marks occur, it is not difficult to save the plate by immediately removing the plate from the developer and washing it for a few minutes under a good stream from the tap, then developing a trifle further than usual and giving the finished negative a dip in a bath of fairly strong reducer. The quick wash ensures the unevenness being confined to the upper surface of the film so that it is readily removed by a very brief immersion in the reducer with scarcely any effect on the remainder of the image.

Many retouchers who apply color to the glass side of a negative, either by dabbing or with an airbrush, do not afford any means of protecting the work and, in the course of handling in printing, etc., one often finds that much of the work is rubbed off. I always use celluloid-varnish to protect the work. It is quite effective and it is easy to give the glass a coat of it. Before applying the varnish, I warm the plate and let it cool again just as far as the film-side because most watercolors are rather hygroscopic. Negatives which have been worked up on the back with pencil, either on mat-varnish or other mediums, should always be protected with a coverglass—which can often with advantage carry more work—or a coat of mat-varnish for diffusing-purposes.

When using a broken negative, which has been bound on a glass with gummed strips, iridescent marks are not infrequently the cause of a lot of trouble and, especially, if used through the enlarging-camera when making a transparency for reproduction. I find that these marks can be got rid of easily by treating the plate in the following manner. Scrape the binding-strip off the edge a little way along, trim a match-stick or other small piece of wood to a wedge-shape, and insert the thin edge of the wedge between the two glasses just to the depth of the binder. Then cut off the piece of wood smooth with the glass. Thus air is permitted to enter between the two glasses and so disperses the iridescent marks. Sometimes, it is necessary to do this on two sides of the glasses; but this depends on the position

of the marks, or the number present, and the size of the plate.

In my early experience in photography, I did not recognize that the emulsion, with which a plate is coated, was as sensitive as it is to other influences beside that of light. Consequently, a number of my plates were partly or wholly ruined. Once I laid six plates, film-side down, on a piece of cardboard and a few days afterward, when I wanted to use the plates, I was astonished to find that all were injured. At first, I could not account for the trouble; but I remembered cutting the board from a large box in which we had previously kept a quantity of flowers of sulphur. Before using the board, I wiped it thoroughly and it appeared perfectly clean, but there were substances of the sulphur within the board which ruined my plates.

At another time, I wrapped a number of plates face to face for protection in heavy, brown wrapping-paper and, after they had been put away for about a month, I wished to use them, but was shocked when I found that every one was entirely ruined. The paper contained some injurious substance which had started at the edges of the film and extended more than an inch and a half all around the plates. I have also found that plates are easily injured by being kept in a room where a gas-burner is used. The practice of laying a plate with the film-side next the glass side of another plate for a short time, after exposure and before development, is certainly a poor one. I have seen negatives sadly marked as a result. Much good money is thrown away by the careless handling of plates both before and after development. In preserving my negatives, I use the transparent preservers and have a special case in which they are kept.

In removing varnish from dryplate-negatives, I proceed as follows. I put the varnished negative in a vessel and pour over it a solution of methylated spirit, ten ounces, caustic potash, one ounce, and water, twelve ounces. I gently rock the container until the varnish is dissolved, then wash the negative thoroughly under the tap. [If the transparent negative-preservers, mentioned by Mr. Underwood, are chemically pure and properly made, they will serve their purpose well. Nevertheless, an old sample of this type of preserver has been received at this office with the complaint that several hundred 5 x 7 glass negatives thus "preserved" have become hopelessly discolored. EDITOR.]



UNDER THE SPREADING OAK

GEORGE W. FRENCH



EDITORIAL



Pictorial Advertisements

AT the recent meeting of the Associated Advertising-Clubs, at Indianapolis, Mrs. Christine Frederick declaimed against pictures of women, arrayed in an evening-gown, painting pantry-shelves, or standing in a reception-dress at a washing-machine. "You have the wrong psychology when you show a picture of the goods being used by a woman prettier than I am. You advertisers have gone mad over the pretty-girl model—the artificial, manieured manikin. I make a plea for the genuine, homely, human model." The psychology of the advertiser is sound and shrewd, in spite of Mrs. Frederick's objection, declares the *Boston Herald*. A homely woman says to herself, "I, too, will be pretty, if I use that machine."

What purchaser of a magazine to-day does not enjoy the portraiture of domestic bliss, the young wife recommending this or that breakfast-food which she with her own hands is putting on the table; the children clamoring for a favorite dish; the water-nymphs in stream or tub singing the praise of a certain soap; the fair women, all the fairer by their choice of hose and lingerie? But fair women and pretty children also distinguish the advertisements of photographic products as they appear in the photo-press and other illustrated magazines. The Kodak Girl, demonstrating the use of a folding camera or the proper way to develop films, is famous for her refined beauty and potent charm. The merits of the Ruby Reflex Camera are greatly enhanced by the attractive, close-hatted girl-model; while the superiority of the Anseo Speedex Film is proclaimed by a beautiful equestrienne. Fewer photographers would install a Cooper-Hewitt Lamp in their studios but for the artistic pictures of comely sitters that appear in the maker's advertisements. And so it goes. Of course, the thing can be overdone; but an examination of the advertising-pages of this magazine will reveal a wonderful variety of pretty models and their special activities.

These pictorial advertisements will be studied carefully by the future historians of manners and customs in the United States. The contrast between these appeals to attention and subsequent purchase—and those in the periodicals of forty, twenty, even ten years ago—is startling. The technique of the artist has grown freer and

surer, and the women portrayed show, from year to year, the changes in costume, customs and domestic life.

"My Photographer"

MR. CLAUDY certainly struck a sympathetic chord in many a breast with his proprietary term, "My photographer." Nevertheless, it may be well to state that, ever since the beginning of the practice of photography, persons and their families were accustomed to patronize one photographer, exclusively. Some of the early portraitists with long, active business-careers—Ryder, Bogardus, Gutekunst, Roeder—enjoyed the unbroken patronage of most of their sitters throughout several generations, producing the uniformly high-class work that made their studios famous. To-day, first-rank photographers are equally favored, because, like the craftsmen of old, they make their own sittings, and thus maintain their artistic individuality. There are many studio-proprietors with a reputation as artists, who are themselves expert operators, but who assign to assistants the task of making sittings. So long as these studio-assistants maintain the high artistic standard of the studio—well and good; but when an efficient operator is replaced by one of mediocre ability—as is sometimes done—the quality of the work is lowered, and customers may not receive what they have a right to expect. Every large city has its high-class studios, marked by dignified and honorable business-methods and uniform courtesy. To take an unfair advantage of a patron—such as rendering a bill with fictitious charges and *forcibly collecting* it—never occurs to them. Boston, for instance, has a goodly number of portrait-studios of that high character, notably those conducted by Garo, Notman, Champlain and Jamieson. Each of these portrait-artists has earned the distinction of being referred to by his appreciative and permanent loyal patrons as "My photographer."



THE theory held by some that the retinal image of the last person seen by a murdered man can be made visible by photographic means, merits no serious thought. Lifeless human tissue retains no available impression.



FIGURE-STUDY—MISS CHRISTIAN OF BOSTON

WHITE STUDIO, BOSTON



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.**

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff corrugated board, not the flexible kind—or with thin wood-veneer.** Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Rural Scenes Competition Closed July 31, 1920

First Prize: E. M. Pratt.

Second Prize: Charles H. Partington.

Third Prize: Clifton Adams.

Honorable Mention: Charles P. Abs; J. E. Carson; Linda E. Cattell; F. H. Chant; Mrs. T. Collison; J. Louis Cunningham; Mrs. Martha Curry; H. P. Dahlen; Maude Lee Eldridge; Oliver Frantz; Herbert J. Harper; Theodore H. Housel; Henry A. Hussey; Clifford Kalish; George H. McKelway; Arthur C. Miller; Harold B. Neal; John F. Roberts; Edwards H. Smith; Kenneth D. Smith; Elliott Hughes Wendell; Leopold Zwarg; W. C. Zwayer.

Subjects for Competition—1920

"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

1921

"Winter-Sports." Closes January 31.
"Home-Portraits." Closes February 28.
"Copying Works of Art." Closes March 31.
(Paintings and Statuary.)
"Home-Scenes" (Interior). Closes April 30.
"Street-Scenes." Closes May 31.
"Summer-Sports." Closes June 30.
"Summer-Flowers." Closes July 31.
"Shore-Scenes." Closes August 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.



HARVESTERS

E. M. PRATT

FIRST PRIZE—RURAL SCENES

Giving the Camera a Chance

ONE difference between the beginner and the more experienced hand which tells very much in favor of the latter is that he always believes in "giving the camera a chance," says G. T. Fryer, in the *Amateur Photographer*. In other words, he recognizes that the conditions are quite difficult enough to get successful snapshots even when they are most favorable, and so is on the lookout all the time to see that they are as favorable as he can get them.

For example, the subject may be one of some street in which there are nearly sure to be moving figures. The inexperienced worker may look in his finder to see that he has got that particular view of the buildings which pleases him best, and that found, may make the exposure without a thought to the figures and vehicles that may happen to be included also. He knows that he has a "snapshot-camera," intended for photographing moving objects, and therefore assumes that any of these which may be moving will be sharply depicted in his photograph. Or he may realize that they constitute a difficulty, and wait until the street is perfectly empty; or, again, he may adjust his shutter so that it gives an extremely short exposure, to make quite sure that he gets everything sharp.

Each course is open to objection. Ignoring the moving figures, he may get them blurred, because his

shutter was not going fast enough; whereas if he speeds it up to get them sharp, his negative may be a failure from underexposure.

In such a case as that which is supposed, the more practiced hand will set his shutter to give the longest exposure he dare, if it is adjustable, and then will wait until the street is in the most favorable condition for making an exposure. That is to say, if there are any quickly moving figures, until they are comparatively distant, and will not be crossing the line of sight at right angles, or be particularly conspicuous. An unsharp figure in a prominent place in the photograph is an eyesore; whereas tucked away in some shadow, against which they do not contrast very strongly, figures may be quite considerably blurred without being noticeable at all.

Similar considerations apply to other subjects also. What we have to do when photographing a moving object is to arrange things so that during the exposure which we give, the image, not the object itself, will have moved as little as possible. It will be seen that the speed at which the object is actually moving is only one factor, and with judgment can be made unimportant. A man slowly pushing a hand-cart may require a very much shorter exposure than an express train traveling at sixty miles an hour. It is all a matter of movement of the image; and this is governed by the scale of the picture and direction of motion.



ROADSIDE HOME, KENTUCKY

CHARLES H. PARTINGTON

SECOND PRIZE—RURAL SCENES

The further the camera is from the moving object, the slower may be the exposure without any movement showing. This is plain enough, since the greater the distance, the smaller the image. An express train a mile or two away can be photographed with the slowest speed of the shutter, or even, if the conditions are otherwise favorable, with a time exposure given by hand. But a man two or three yards from the camera—walking across at right angles to the line of sight—cannot be sharply photographed at all by any of the more ordinary forms of hand-camera.

Closely akin to this is the focus of the lens. The point is often overlooked that the longer the focus of the lens, the shorter must be the exposure to secure moving objects quite sharp. This follows from the fact that the scale of the image is in proportion to the focus of the lens. Thus a ten-inch lens gives an image twice as large (linear) as a five-inch lens; and therefore the distance which the image of any moving object has moved in a given time, will be twice as great with a ten-inch lens as with one of five inches focus.

But from a practical photographic point of view, the most important factor of all is the angle made by the line of direction of motion with the line of sight. The image moves most when the movement directly crosses the line of sight at right angles; whereas when the movement is in the line of sight exactly, there is no movement at all, except so far as the image increases, or decreases in size, as its distance from the camera varies. This last case does not often occur in snapshot work, although it does at times, most often in the case of sailing boats; but in almost everything which the amateur wishes to snapshot, he can make great use of this. By selecting his standpoint so that the moving object travels at a narrow angle to the line of sight, he will be least troubled by movement. Moreover, by so doing he not merely secures a technical advantage; he has the pictorial advantage that such a position almost invariably gives a better and more effective rendering than when an object is photographed broadside-on. These are the chief, but not the only, ways in which we can "give the camera a chance."



A SUNDAY MORNING IN PICARDY

CLIFTON ADAMS

THIRD PRIZE—RURAL SCENES

Focus in Copying Near Objects

IN an English cotemporary we find a note of value to photographers who are called to make pictures of objects close to the camera. Although a minor optical problem it is one which on some occasions is of practical importance in the determination of the point on which one should focus in making a large-scale copy of some small solid object, for example, a geological specimen, at close quarters. Obviously, one must focus on a point somewhere between the nearest and the most distant part of the object, and, as will quickly be found, this point is a relatively short distance behind the nearest part. It is, however, an easy matter to find out by simple arithmetical calculation the distance from the lens on which focusing should be done, to focus on a point at this distance, and so, on stopping down the lens, to obtain the maximum distribution of definition. Suppose, for example, that the nearest point of the object is three feet from the lens and the furthest point five feet. Then the distance on which we should focus is $3 \times 5 \div 2 : (3 + 5) = 3\frac{3}{4}$. That is to say we should focus on the part of the object which is 9 inches behind that part of the object which is nearest to the camera. A piece of printed matter held in the position thus indicated will allow of sharp focus being more readily obtained than by focusing on the object itself. It should be added of course that in the application of this rule, the camera should be one of the rear-focusing pattern; the distances would be upset by any alteration in the position of the lens after measurements had been made, and in photographing

upon a relatively large scale such alteration can easily be considerable.

Fixing-Bath Spots

IN *The British Journal* we read that a form of yellowish spots in some negatives which a correspondent sent in may be a cause of mystification to others. The spots are darkish yellow in color and of about the size and shape of the clear spots generally recognized as due to air-bells on the plate during development. They have, in fact, an origin closely akin to these latter, being due to air-bells clinging to the plate while in the fixing-bath. The action of the latter is thus impeded, with the result that the plate is only partly fixed in these minute places, and the tiny discs of partly-fixed emulsion subsequently darken. Apparently, the physical surface-texture of some plates favors adhesion of air-bells more than does that of others—one notices that one brand of emulsion film feels rougher to the touch than another—but the occurrence of spots of this kind may be taken as a warning that the allowance of time in the fixing-bath is being unduly curtailed, or, alternatively, that there is not the provision in the darkroom of a bright, diffused white light against which negatives can be examined before being passed to the washing-tanks. If such a rapid test were made the rule, spots of this kind could not escape notice. The possibility is one more argument in favor of a white light in the darkroom—for use when required and in the proper place for it, over the fixing-sink.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



A FAMILY-COUNCIL

E. D. LEPPERT

Advanced Competition—Domestic Pets Closes November 30, 1920

EACH year the interest in our "Domestic-Pets" competition seems to grow, and it is now one of our most popular pictorial contests. The camerist may admire handsome buildings, revel in the grandeur of lofty mountains, delight in the ever-changing moods of the sea and devote his time to the marvels of photomicrography; but when it comes to his pets—there is *heart-interest!* One outstanding feature about the photography of pets is that it is based on attachment and not solely on pictorial interest. The photographic portrayal of that which is dear to the photographer usually calls forth his best artistic and technical skill. It matters little whether the pet is a canary, turtle, goldfish, rabbit, parrot, cat, dog, calf, colt or chicken—there is no question that it fills its own niche in the hearts of the household. There are persons that be-little the affection and care bestowed upon pets; but give me the man or woman who can win a dog's devotion in preference to one who cannot.

It is a comparatively simple matter to photograph a pet, if no attention be paid to the composition or appeal of the picture. At the outset, it will be well for contestants to remember that this competition does not call for *record-photographs* of domestic pets. There

must be an appeal, and it must not be artificial. Do not attempt to dress up pets in all manner of grotesque costumes, or induce them to simulate some human act like smoking a pipe, being ill in bed, etc. Such pictures do not express the purpose of this competition. Let us have our pets as we know them, free of all artificiality. However, with regard to commercial pictures made to appeal to the general public, pets may be dressed up and induced to perform strange antics.

It does not follow that the "Domestic-Pets" competition must be confined to those usually kept in the house; it may include pets kept on the farm or estate. However, such animals must be *pets*, not merely domesticated animals. An intelligent horse may become just as great a pet as a cat or a dog. Even raccoons, foxes and pheasants have been known to become great pets. In short—any animal, bird or reptile or fish that has been made a pet, is eligible to have its picture sent to this competition. However, remember that such pictures must make an appeal to the beholder, and not represent merely a commercial record. Particular emphasis should be placed on some little trick or habit that is out of the ordinary.

If unusual combinations of animals are unobtainable, a pet—such as a raccoon, cub-bear, fox or deer—offers excellent opportunities to the intelligent camerist. The very fact that these animals are more often wild

than tame, is an entreaty that few can resist. Although the animals hold the interest of themselves, it is just as important as ever to use care with regard to pictorial composition. Try to avoid a background of clapboards, shingles, bricks, picket-fences and other vertical and horizontal lines. A clump of bushes, a flower-bed, a wheat-field or orchard may be utilized to advantage.

There is one important point to be taken into consideration. Some persons are better adapted than others to manage animals successfully. Unless the camerist can make friends with the pet to be photographed, his chances of success are reduced to a minimum. No animal will act or appear natural, if it is frightened or distrustful. Sometimes, personality alone is responsible for the restiveness of pets; and, whenever this is found to be the case, the camerist had better seek other subjects. I do not mean to imply that the camerist's personality is repellent, but rather that his physical or mental characteristics are such as to arouse fear or suspicion. Some of the most refined and likable people have an aversion to cats and dogs; and, usually, the cats and dogs reciprocate heartily. Fortunately, in most cases there is harmony, and the camerist can devote his entire attention to his willing, although somewhat unruly, subject.

Without a doubt, the reflecting-camera is best suited to the photography of domestic pets. The invaluable advantage of being able to watch the subject up to the moment of exposure enables the photographer to obtain the best and most natural results. Of course, other types of cameras may be used successfully. I do not mean to imply that they cannot be used; however, the fact remains that the reflecting-camera is the best adapted to the subjects under discussion. Next in utility are those cameras that are equipped with a groundglass focusing-back. These permit the camerist to focus accurately and to compose the background; but with regard to catching the psychological moment—that is out of the question; for by the time the plateholder is inserted, the subject's position is apt to change. In using a camera of this type, the most satisfactory method is to focus and compose the background, then insert the filled plateholder, remove the slide, and with the wire-release or bulb in hand await the desired position of the subject. Roll-film cameras and other types that have no groundglass focusing-back must be focused on a given point as accurately as possible by scale, and the subject must be placed at this point in order to register sharply at the moment of exposure. A direct-view finder is of great assistance although, obviously, it cannot have control over the focus. To sum up the question of cameras suited to domestic-pet photography, there is no question that the reflecting-camera is supreme. However, other cameras may be used successfully, provided that the focus, exposure and composition are carefully co-ordinated. Perhaps, the greatest asset of all is technical and artistic ingenuity. By that I mean the ability to meet the unexpected problems that arise inevitably in this branch of photography. There are all kinds of little expedients that may be used to gain a point, and the intelligent camerist should be alive to each and every one of them. Only by quick thinking and alertness can success be achieved.

A fact that has amazed me many times is that those fortunate persons who possess several pets, seldom give the matter of photographing them a thought. For example, during my sojourn in the mountains this summer, I visited many farms, and often I would come upon rare combinations of pets. One day in particular I called at a delightful old farm and, in looking for the

owner of the place, walked around toward the barn. It was late in the afternoon and the sun was shining comfortably on a sort of loading-platform from which hay, grain and produce were transferred to wagons. On this platform—sunning themselves and, evidently, on the best possible terms—were two beautiful Angora cats, a collie, a peacock, three or four geese and several hens. Just then the man of the house came around the corner, and I pointed out what seemed to me to be a very unusual state of affairs. He laughed and said that he had become so used to seeing these animals and birds together, that he did not even notice them now. I suggested that he might make a few pictures and sell them to advantage. Again he laughed. "What do I know about a camera?" remarked he. I attempted to explain that he needed very little photographic knowledge to make some excellent pictures of a subject that many camerists would travel miles to find. It was of no use, and I imagine that there is an abundance of rich subject-material going to waste because of indifference to the possibilities of the camera. If this man could have realized the opportunities literally staring him in the face, he could have made a few extra dollars and also enjoyed his pets the more. Although my friend failed to grasp the value of a camera to him and to his pets, it was not due to any lack of love for them. There are few farms where virtually every animal and bird is such a pet, and so well taken care of, as on this farm. The latent artistic and photographic instinct could not be aroused; but I hope that some day it may be, then the rest of us will see pictures.

The ideal method to photograph pets is the one with which the camerist waits for the subject to assume a *natural pose in natural surroundings*. Many camerists attempt to use force. By that I mean that they pick up a kitten or puppy, take it out of doors in the sun, try to make it look cunning, and end the farce by obtaining a picture that has no merit other than that possessed by a record-picture. In the case of my friend, the farmer—had he been making pictures—each animal and bird was at rest and in an entirely familiar environment, hence natural. Suppose that he had decided to photograph the cats, dog, peacock, geese and hens at the front instead of at the back of the barn. One may imagine the difficulties that he would have had. However, his doing so would be no more absurd than the attempts that some camerists make to force things; and let me assure the reader that from actual experience I contend that no successful domestic-pet picture can be made, unless the subject is natural, unafraid and in its natural environment. After all, these requirements ensure the truthfulness of the picture and are the factors in its technical and artistic make-up that cause it to appeal to the beholder. In short, it rings true; and that is what every picture that we make should do.

Inasmuch, as the editors and the jury, one and all, have had or still have pets, the camerist who enters this competition may rest assured that his picture will receive sympathetic consideration. We appreciate the difficulties that must be surmounted and the infinite patience that is often required to obtain a result that is apparently very simple. There is a common bond between all lovers of animal- and bird-life; and this, added to our mutual interest in photography should make this competition more popular than ever for those that send prints; for those that judge them, and, finally, for those that see the prize-winning pictures in PHOTO-ERA. The opportunity is at hand. Now let us see every subscriber, reader and friend of PHOTO-ERA make the most of it.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two* years' practical camera-activity, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of *stiff corrugated board*—not the flexible kind, or with thin wood-veneer. Large packages may be sent by express.

Awards—Beginners' Competition

Closed July 31, 1920

First Prize: Edwin A. Falk.

Second Prize: Albert A. Sterritt.

Honorable Mention: R. H. Addison; Herbert P. Dahlen, Jr.; James A. Dooley; Thaddeus S. Hess; George F. Hogan.

The Beginner and Autumn-Photography

For many beginners it seems to be an unwritten law that after vacation-days a camera should be packed away for the winter. Those who have been privileged to spend considerable time in the mountains, at the seashore or in travel, appear to assume that when they return to their homes there is nothing to photograph that is of interest or value. Of course, I admit readily, that after the beginner has feasted his eyes on lofty mountain-ranges, scanned the limitless horizon and traveled far and wide, his own garden or nearby city-park appears to lack pictorial interest. However, my plea is that during the clear, cool days of autumn is not the time to lay the camera aside.

Although color-photography with Autochrome plates is usually considered to be a bit beyond the beginner, I know that *some* have made a success of this branch of photography at the very outset. For the encouragement of the ambitious beginner let me say that there is no reason why he should not be successful, provided that he has the proper equipment and will stick to the simple but explicit directions that accompany every box of Autochrome plates. Autumn-foliage is so gorgeous and beautiful that to reproduce it in the colors of nature is an achievement that is well worth the time and expense. Not only does the foliage attract the eye of the nature-lover, but the many autumn-flowers that are fully as beautiful as those that bloom during the summer-months.

Those beginners who, for one reason or another, are unable to attempt color-photography, should give their attention to the excellent results that may be obtained by using a carefully selected ray-screen in connection with orthochromatic plates and films. A serviceable ray-screen may be obtained of any photo-supply dealer at moderate cost and its use is easily mastered. Next to a picture in the actual colors of nature is one in which the *color-values* are retained in monochrome. That is, if the beginner happened to be photographing blue asters without using a ray-screen the flowers would appear pure white in the finished print. By using the ray-screen, the beginner would not, of course, obtain a blue color in the final print but he would be able to show that the flowers were not pure white. Thus he would retain the *color-value* but not the color of the blue asters. With regard to photographing autumn-foliage, the beginner will find that by using a ray-screen the reds, greens and browns will not all appear to be dead black, but rather a gradation of tone-values that will add immeasurably to the beauty and attractiveness of the final print. The use of a ray-screen is within the photographic reach of any beginner and he should lose no time to obtain one before the leaves begin to turn.

It is to be regretted that so many beginners early in



A MOTH

EDWIN A. FALK

FIRST PRIZE—BEGINNERS' COMPETITION

their photographic career seem to become obsessed with the idea that photography is a *summer-activity*. Once and for all time, let me assure every beginner that his camera need never be idle in spring, summer, autumn or winter. Each season of the year has photographic attractions of its own and a glance through a few volumes of PHOTO-ERA will prove the statement to be based on fact. Obviously, light and weather-conditions in summer are more conducive to picture-making; but the beginner should not consider himself to be a "fair-weather" photographer and put his camera away the moment the frosty air nips his fingertips. The four seasons offer the ambitious camerist welcome changes of technical and pictorial material and it should be his pleasure and purpose to master the conditions imposed by each season of the year. Some one has said that Nature is always wonderful and beautiful and I believe this to be true with regard to the photographer's relation to the great outdoors. In Nature the beginner finds much, if not all, of his picture-material; and the sooner he thinks of the mountains, woods or seashore as all-the-year-around storehouses of pictorial subjects for him to seek out, the sooner will he cast aside the erroneous idea that photography is merely a *summer-activity*.

In autumn there are long shadows, soft twilight-hours and the harvest-fields to attract the beginner who is sincerely eager to make the most of his photographic work. Even though the vacation-days are over there are many readers of PHOTO-ERA that are within short distances of the open country and even the larger city-parks are not to be scorned as suitable places to obtain worthwhile pictures. Let every beginner make up his mind to keep at his camera-work this autumn, and every autumn, even though it may require a little personal exertion and expense. The point is to get every benefit that is possible from the investment. No person would purchase an automobile and use it only in July and August of each year; but many camerists confine their photographic activities

to these two months and thus fail to get even a fair return on their investment of time and money.

Another point, in connection with the matter of giving up the use of the camera at the conclusion of vacation-days, is that it rather tends to show that the beginner is not very serious about photography. If the use of a camera is of such transient interest that the camerist loses the desire to make pictures after a few weeks, he cannot—in justice to the thousands of enthusiastic beginners—be called a photographer. However, in presenting my plea for continuous camera-activity throughout the year I do not mean, for a moment, that the beginner should make pictures to right and left for the sake of keeping up the photographic interest. What I do mean is that the camerist will enjoy many happy hours afield and at home if he will take his camera along on his walks of a Sunday or holiday during the autumn and winter. On days when the weather is too cold or unpleasant for outdoor-pictures there is the inexhaustible field of indoor-genres, portraits and other interesting material from which to select suitable subjects. In short, without making a task of it, the beginner can keep up his camera-work with very little effort and thereby slowly attain a knowledge of technical and artistic photography that will become a permanent source of pleasure and pride. As I have said many times, it is the successful camerist that enjoys photography and makes the most of it consistently; and to be a successful camerist, the beginner must make up his mind to master the rudiments before he can hope to hang his pictures in a salon. Unless the beginner at tennis can get the ball over the net with some degree of certainty, he is not rated as much of a player. In photography, unless the beginner can make a good negative and a good print technically, he is not very apt to be able to make a pictorial masterpiece. It is persistent, methodical and painstaking all-the-year-around photography that will enable the beginner to make rapid progress and afford him much pleasure as well.

A. H. B.



PENSIVE

ALBERT A. STERRITT

Using Alcohol to Dry Prints

WITH the growing popularity of rotary machines for the drying of prints by heat, methylated spirit for the same purpose is likely to be less commonly in regular use than formerly. Nevertheless, *The British Journal* goes on to say, the latter will continue to be the stand-by of those who require prints quickly on occasion and to whom "spiriting" is the readiest, although a somewhat expensive process. Many photographers, perhaps, saw most of the method during their service with the Royal Air Force photographic section in the war, when, if the various accounts we heard were true, economy of alcohol was not a feature of the operation; when, indeed, alcohol was profusely requisitioned as a means of warming the draughty huts or châteaux in which photographic work had often to be done. It is therefore worth while to remind users of the process that a large measure of economy may be realized in several ways, the total effect of which is considerable. If the prints, wet with water, are first squeezed on glass-plates a large proportion of the surplus water is mechanically removed, leaving less for the alcohol to extract. A pair of rollers, such as the domestic wringer, is a more expeditious appliance for this purpose than a bar or roller-squeegee. Next, thorough draining of the alcohol-soaked prints effects a further economy, the observance of which is facilitated by the provision

of a few clips fixed so that the prints may hang for a minute or so above the alcohol-dish. Also, the use of two alcohol-baths in succession is more economical.

Frilling and Temperature

IN consequence, no doubt, of the temperate climate of the United Kingdom the frilling of negatives in the course of development and fixing, is a thing which is rarely encountered. Perhaps, an English cotemporary goes on to say, the most common example of its production is that in which the cause is similar in kind though different in origin, viz., the hardening of the film in the bleaching-bath and its softening in the darkening-solution, when using the mercury-ammonia intensifier. Sudden changes of temperature may have an effect similar to this chemical action, but they are rare and when they do occur, exhibit the phenomenon in minor degree. We were, however, shown some the other day in which the cause was traced eventually to the fresh compounding of a fixing-hardening bath, which was used for plates while still in its chilled condition, due to the solution of the hypo. Removal of the plates to tepid wash-water—it was in a hot spell of weather—brought about a quite perceptible patterning or frilling of the gelatine which could be attributed to no other ascertainable cause.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Waterproofing Wooden Trays

I NEEDED a few large-size trays for enlargements some time ago, and, being situated in the country, I decided that it would be better to attempt making my own.

I had seen various methods of making trays, using wood, cardboard, white lead and paraffin, but the making of these evidently needed more manual dexterity than I possessed, for none of mine were waterproof. Some of those made of cardboard and very light wood bulge tremendously when one uses a generous amount of developer in them. However, I have made a really satisfactory tray at last, and the secret of its success lies in the waterproofing solution.

Procure a large, old, iron-saucepan, and melt 3 lbs. of resin in it over a small fire. Watch and stir this carefully, or it may boil over or catch fire. When the resin is thoroughly melted, stir in 8 ozs. of powdered plaster of Paris, and when this is incorporated add the same amount of red ochre.

Stir well, and, when thoroughly mixed, add about 8 ozs. of linseed oil. Boil and stir the mixture till the tendency to boil over ceases; it is then ready to apply.

It is a good plan to keep the mixture on the fire, and to coat the tray over the saucepan and subject to as much heat as convenient. Use a good, wide brush, and paint the inside, taking care to work the mixture quickly and thoroughly into the crevices. When this is completed, paint the joints on the outside—it is quite unnecessary to paint the whole of the outside.

Leave for about fifteen minutes, and test to see if it holds water. If not, apply more of the mixture where necessary. Pour out the water as soon as possible, and leave the tray a day or two to harden thoroughly. The quantity given is sufficient for about five trays, and is, of course, applicable to the smaller sizes.

For instance, a cigar-box of suitable size, from which the alleged decorative paper is removed, when coated, makes a good developing-tray. These trays will withstand virtually all the chemicals a photographer is likely to use, and are very serviceable.

D. R. GIBBS, in *Australasian Photo-Review*.

Use Hypo Sparingly

As hyposulphite of soda has increased in price more than two hundred per cent, the following suggestions may prove useful to amateurs who have only two or three plates to develop each week. When I use my $3\frac{1}{4} \times 4\frac{1}{4}$ plate-camera, it often happens that only one plate is exposed; and an enthusiastic amateur, of course, does not wish, before developing his plates, to wait a week or two, until six or more may be disposed of at once.

I always buy the plain hypo-crystals, in one-pound cartons, and put the entire contents into a wide-necked bottle, with a glass-stopper, so as to keep the crystals dry—especially during the moist summer-months. For the developing of each separate lot of plates, I make, as a rule, a new hypo-solution, as this is the surest way to know that the fixing-solution is fresh and of full strength.

Instead of weighing off one or two ounces of the hypo, each time that I undertake the work of develop-

ing, I have devised a scheme whereby the developer need not be weighed oftener than once a month or so. Being provided with one dozen square, wide-necked bottles with cork-stoppers, in three different sizes (containing one, two and four ounces of crystals, respectively), I fill these all at the same time. For a single plate, I use a small tray (4 x 5 inches), a one-ounce bottle of hypo, and four ounces of water—and the fixing-solution is ready. For four plates, or less, I employ a large tray (7 x 9 inches) and a two-ounce bottle of hypo, which gives eight ounces of solution. The four-ounce bottles are particularly convenient when one is traveling, or on a vacation, and has six plates to develop by means of a tank. Sixteen ounces of water will prepare just enough of the solution to fill a quarter-plate tank.

In addition to the advantage of economy—the saving of hypo—this scheme has the merit of obviating the danger—associated with frequent weighing—of pieces of hypo accidentally finding their way into the developing-tray.

FELIX J. F. MARTY.

THE HAGUE.

Single-Solution Sepia-Toners

SIGNS appear discernible of a certain tendency to prefer the single-solution methods of sepia-toning to the bleach-and-sulphide process which has had a good innings during the last ten years, remarks an English cotemporary. One sees paper newly introduced with the recommendation that it is specially suited to toning by hypo-alum, or liver of sulphur, and selenium-toning by a single-solution method appears to be making progress as the result of the extension of the range of colors produced by it beyond the warm black which was about as far as the earlier selenium-toners of the Germans would go. Presuming that emulsions, as now used for development papers, are more suited to these processes than formerly—and we think that is the case—there may be a profitable occasion for a re-trial of the processes of single-solution toning which figured prominently in the year preceding the war, notably those of Lumière and Seyewetz, Soar and Desalme, all three of which have a certain family likeness, since a sepia-tone is obtained by a species of direct sulphiding.

At-Home Course in Motion-Picture Photography

CAMERISTS eager to enter the motion-picture field as professional cameramen, and unable to take the practical course offered by the New York Institute of Photography, either on account of the attendant expense or inability to move to New York City for the purpose, have an alternative open to them. This alternative is to take this course in book-form, *i.e.*, to procure a copy of "Condensed Course in Motion-Picture Photography," by Carl L. Gregory, F.R.P.S. This large and completely illustrated work presents the subject very fully, clearly and attractively. The price of the book is \$6.00 sent postpaid to any address in the United States by the publishers, or by PHOTO-ERA MAGAZINE. Price with PHOTO-ERA MAGAZINE for one year, \$8.00.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

This picture has many good features. The quality of softness is delightful. On the whole, on account of ample exposure, the tones are good, but while the centers of the daisies must have been yellow, their dark tone would indicate that they were nearly black. By the way, daisies have very little odor, and that not particularly pleasant, hence, a little incongruity in the theme. The background is properly treated; it is a background. The best feature of the picture is the charming ingenuity of the pose of the child. The lady is not so well posed. To me personally, though I know that many would not agree with me, the bisecting of the older model by the edge of the picture is objectionable. A viewpoint including all the figure, and moving the center of interest farther to the right would improve the composition.

BERT LEACH.

EVERY person who looks at this picture, especially those who are fond of the little folks, and most of us are, will find in it, something that makes a strong appeal to us. It has a decided pull. You are strongly held by it. Such a picture as this, will be invaluable to its possessor in later years. Should The King take this gem for His own, which we sincerely hope may not happen, it would be priceless. The technical work seems to be about right, although it would seem that under the conditions named, the exposure might have shortened a little. One well-known meter, gives 1/50 sec., if classified as "Portrait in Open," and 1/10 sec. if "Near Subject, with Near, Dark, Back-ground." A composition, in which there are two figures, is rather hard to arrange, so as to keep the one, more prominent than the other. This, the photographer has done nicely, giving the prominent place to the child. It seems, however, that a better effect might have been obtained, by utilizing the picture the other way of the plate, thus including the whole of the lady's dress, placing the camera a little farther back, if necessary. The daisy showing up so prominently against the arm, should have been removed, before exposing. It



THE PICTURE CRITICISED THIS MONTH

draws the attention somewhat away from the child, the principal point of interest.

GEORGE R. STEVENS.

AN amateur photograph—the ordinary snapshot—usually makes one of two different kinds of appeals: a limited personal one to the photographer and his friends, or the more universal claim to true pictorial value. This print fails to deserve a place in the latter class, I think, because of the slightly stiff pose of both subjects, and, perhaps, also of a certain fault in technique in the lighting which makes the picture appear flat and lacking in highlights and shadows, and without a center of interest. I can imagine that the photographer is proud of this picture of his family, and we will share his interest so long as he does not consider this a high-grade artistic effort for exhibition-purposes. With the given conditions, the artist could have made better use of low sidelights and shadows. In making the enlargement, too, he might have so placed the figures in the picture as to yield a more pleasing result.

L. D. LARIMORE.

To avoid cutting off half of the woman, the figures should have been placed closer together, or better still, the picture should have been made at a less close range, since the distance between the woman and the

child is almost necessary for the pose. The picture, as a whole, has distinct charm; especially, the youngster with her offering of "Daisies." The pose of the little tot is much more natural than that of the mother—possibly she was less consciously posing. And the gaze of the mother would be more natural if directed down to the flowers instead of straight at the child. The daisies dotting the foreground are an effective touch, though the one against the woman's arm looks a little like a tattoo and the offender had better been plucked.

Y. BILLY RUBIN.

EXCELLENT subject, but poorly handled, attitude of lady very ungraceful, position of child though natural is too strained, both figures appear conscious of the fact that picture is being made, thus destroying all spontaneity; the lady—following the direction of her glance—seems more interested in the child than in the flowers. I should like to see the lady turned facing the camera, with the child in about the same position, holding flowers up to the lady whom I would rather see stooping over than "squatting" on the ground. The gradations of print are excellent, as is the rendering of skin-texture and the white dresses. The cutting off of the figure at the left is less objectionable than the position of the figure.

ANTHONY J. WEIS.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THIS magazine considers itself fortunate to present to its many friends so attractive a picture for its front-cover and frontpiece as "Fair Autumn," by our versatile friend, Dr. J. B. Pardoe. Fortunate, too, is the household that has the culinary aid of so cheery and comely a person as the subject of "Fair Autumn." Happy in the act of supplying the table with a product of the garden, the young woman advances and at once becomes the fair prey of the exultant camerist. No need to comment further on the beauty of this appealing pictorial theme. The beholder, however critical, will note with satisfaction the various charming details so conscientiously and capably pictured by Dr. Pardoe.

The original print of "Fair Autumn" was accorded first prize in the "Miscellaneous" competition, which closed May 31, and was reproduced in the August issue. Searching for a seasonable October illustration, the Publisher found nothing so appropriate as Dr. Pardoe's prize-picture and, relying on the approval of his subscribers, did not hesitate to present it a second time, but in enlarged size and, certainly, improved appearance. It may be also interesting to state that, throughout, the picture is the product of straight photography—no retouching of the figure or the pumpkin. The touches of light are absolutely spontaneous and immaculate. Data: November, 1919; 10 A.M.; bright light; 5 x 7 Graflex; 16-inch Ross lens; stop, 5; 1/25 second; Eastman Portrait-Film; pyro; enlarged on P. M. C. Bromide No. 8.

For the benefit of new readers, it may be well to state that William S. Davis, a frequent and welcome contributor, is an accomplished professional painter, and has brought to his supplementary activity, photography, a preparation such as many camerists do not possess. An art-training, such as Mr. Davis has acquired, is a valuable asset in picture-making by photography, and it is suggested that camerists, who would like to excel as pictorialists, but lack a workable knowledge of composition and lighting, can always attend an art-school where there are day- and night-classes.

Mr. Davis' sense of beauty, guided by an adequate artistic and technical equipment, is pleasingly demonstrated in the series of pictures that accompany his article. The data are given there in full.

Chas. F. Marvin, Jr. is a camera-enthusiast of only limited practical experience; but, judging from what I have seen of his work done in the open, he is endowed with a high degree of natural ability and true artistic feeling. These qualities are expressed in his "Waterfall," page 170. He has seen to it that no accessories asserted themselves to the detriment of the principal subject—the falls. Frequently, in portraying the beauty of a woodland-scene, such as this, camerists are unmindful of detracting highlights which generally can be avoided by selecting a favorable lighting.

Enoch M. Barker, the originator of a novel method of mounting prints—as described by him on page 172, and author of the engaging picture, "Ducks," on the same page, made his debut as a photo-pictorialist in August PHOTO-ERA and won well-deserved applause. The group of ducks evidently in rapid motion, occupies the center of the picture-area; but few of our vigilant critics will be tempted to object on that score. The

water-fowl are obviously swimming in a "westerly" direction, but are by no means out of the picture! As to Mr. Barker's specialty in print-mounting, I have had the pleasure to examine a number of prints, prepared in the manner described, put them to the test, and can give my hearty and sincere approval. Data: July, 3 P.M.; fair; 4 x 5 Graflex; II B Zeiss-Tessar; at F/11; 1/155 second; Hammer Red Label plate; section of negative enlarged to 5 x 7.

As has been frequently pointed out, in this department, a white costume or white accessories do not lend themselves to successful treatment when in a dark or a low-toned setting. In the case of the "Crystal-Lens Girl," however, the artist (Victor Darnell) was favored with a model which was arrayed in white throughout, and which he arranged so skilfully as to produce a pleasing effect against a dark background. Then, too, the highlights and half-lights have an agreeably soft quality peculiar to the lens employed. As this type of lens is made of rock-crystal, the title bestowed upon this delightful outdoor-portrait—"The Crystal-Lens Girl"—is eminently appropriate. Data: May, 10 A.M.; cloudy; 5 x 7 camera; Hanovia Soft-Focus Lens; 9-inch focus; stop, U. S. 4; 1/2 second; Stanley plate; Metol; contact-print on Iris A.

The animated and charming landscape, by the late Dr. C. R. Mansfield, page 177, seems to be a fitting illustration for the instructive essay by Max Schiel. For obvious reasons, we were unable to obtain data.

The admirable and characteristic portrait of the eminent English portrait-photographer, E. O. Hoppé, F.R.P.S., page 178, is the work of the late Rudolf Dühkoop, with studios in Berlin and Hamburg, and is published in connection with a brief sketch of Mr. Hoppé and his activities, printed elsewhere in this issue. Data: July, 5 P.M.; rainy weather; 6 seconds; Seed plate; platinum-print.

I am assured by relatives of the subject of the portrait, by Floyd E. Vail, that appears on page 183, that it is an excellent likeness. Of the artistic quality of the picture, there is no doubt. Both subject (father) and artist (son) are members of the Camera Club of New York. The original print, by Floyd E. Vail, and a snow-scene, "A White Christmas," by Floyd Vail (exhibited at the Royal in 1918) are part of a members' permanent exhibition, at the Camera Club of New York, described in our September issue. Data: July; Mercury vapor lamp; Century Studio camera 11 x 14; 15-inch Wollensak Vitax-stop, F/5; one second; Seed 30; pyro-soda; oil-print.

The beautiful nature-study, "Under the Spreading Oak," by George W. French, comes under the class of "landscapes with figures," and is one of the best things that this sterling artist has done. The tree is placed advantageously in the picture-space, of course dominating the landscape and producing a vigorously expressed picture with a full scale of gradations. The figures add interest to the scene, although their presence is not imperative.

It is not often that readers of PHOTO-ERA are favored with the picture of so strikingly beautiful and shapely a model as presented on page 191. It will also be admitted that few women that present a thoroughly satisfactory front-view, can meet successfully the

ordeal of a profile. In this instance, the White Studio, of Boston, U.S.A., has made several admirable portraits of Miss Christian, a lady in private life, presenting the sitter in full-face, three-quarter view and in profile, in which the perfectly molded features appear equally to advantage. It is very much like viewing, for example, a bust of the Venus de Milo from every angle—there is no choice, so long as the features can be seen. Of the several poses and studies made of Miss Christian at the White Studio, the one selected by the Editor for publication in PHOTO-ERA, is the most comprehensive in physical beauty and in striking pictorial effect. Data: Studio camera 8 x 10; Cooke lens; pyro developer.

Advanced Workers' Competition

WITH refined, sensitive artistry, E. M. Pratt's picture of harvesting in California, leads the prize-winners in the "Rural Scenes" competition. This composition is one of the finest achievements of this uniformly creative pictorialist of the Golden State. The masses are managed with rare skill, the figures are placed with admirable judgment and the light has been chosen so as to produce a minimum of highlights in this low-toned somewhat somber landscape. The touches of light on the backs of the horses is the most telling note in this noble and expansive picture. If there were one regret in the mind of the critic, it would be because of the comparatively sharp outline of the distant mountain. Data: July, 5 P.M.; bright light; 4 x 5 view-camera; 12-inch Struss Pictorial Lens; stop, F/5.5; Ingento B color-screen; 1/15 second; Hammer D. C. Ortho; Aduro, in tank; Wellington Bromide enlargement.

The outstanding merit of the old Kentucky home, page 194, is the remarkable effect of light and shade, and the extremely pleasing quality of the print. The proportions of the picture add much to the success of the general pictorial effect. Data: scene of the subject, Constance, Ky.; July 25, 1920; 9 A.M.; full sun-light; 4 x 5 view-camera; 12-inch Smith Semi-Achromatic lens; at F/7; Cramer Iso No. 2 color-screen; 1/25 second; Seed L Non-Hal. Ortho plate; pyrometol, in tray; enlarged on P. M. C. Bromide; metol-hydro.

Clifton Adams' overseas successful entry forms a pleasing break in the long array of American subjects. The subject is horseshoeing in Picardy, on Sunday morning. The method of attaching the shoe is typical, and the setting characteristic of a small town in Northern France. The story is told in a quiet, simple way, with only one onlooker—the helping wife of the blacksmith. Data: July, 10 A.M.; dull light; 4 x 5 Auto Graflex; 6-inch Cooke lens; stop, F/8; 1/20 second; Eastman Film-Pack; Kodak Tank-Powders, in tank; enlarged on P. M. C. Bromide.

Example for Interpretation

OF all the PHOTO-ERA competitions, none seems to be more popular than the one devoted to Domestic Pets. In searching for a suitable example, we came upon E. D. Leppert's masterpiece, "A Family-Council"—a first-prize picture in our Beginners' Competition, September, 1915. At the time we made the following comment and it expresses our opinion to-day: "E. D. Leppert may pride himself in having produced an exceptionally successful portrait-group of Chanticleer and his friends. One could not ask anything better in arrangement and workmanship. To say that it deserves to be ranked with Howard S. Adams' group of young foxes, published in October, 1913, PHOTO-ERA, is but just praise. The detail and scale of gradation

are held well, which is proof of good judgment throughout. Data: Made at noon, in shadow; 6½ x 8½ Conley View-Camera with F/6.3 lens; open aperture; 1/5 second; 6½ x 8½ Seed 30; developed in tray, with pyro."

Beginners' Competition

EDWIN A. FALK has certainly produced an admirable nature-study—no doubt, a *con amore* task. There is a graceful line—indeed, grace is the keynote of this pleasing picture. But, as a mere matter of coincidence—Edwin A. Falk can well afford to study admiringly, the supremely beautiful moth-pictures of Edwin A. Roberts, which, adequately reproduced, may be found in PHOTO-ERA for May, 1916. Data: June, 3.30 P.M.; indoors, good light from south-window; 4 x 5 Premo Camera No. 9; 6½-inch Planatograph lens; at F/8; K2 color-screen; 35 seconds; Premo Film-Pack; Eastman Film-Pack Developing-Powders; enlarged on P. M. C. No. 2 Bromide, from part of negative.

Though portraiture tests the artistic and technical skill of the photographer, Albert A. Sterritt deserves high praise for an eminently successful attempt. Page 200. To be sure, the darkest tones are intense blacks, owing to underexposure; the general effect is striking and pleasing. The direction of the eyes conveys the impression of pensiveness, the young artist desires to convey; for it would have been lost, had the model looked into the lens, and a portrait, not a genre, would have resulted. It is an easy matter to subordinate (in the negative) the annoying vertical lines in the background. Data: July, 7.30 P.M.; bright light; 4 seconds; 6½ x 8½ view-camera using a 4 x 5 plate; 11-inch Symmetrical lens; stop, U. S. 4; 4 x 5 Central plate; M. Q. in tubes; contact-print on Velox Contrast.

Our Contributing Critics

AGAIN we have selected a still-life print for the critical comment of our assistant-critics. The approaching "indoor" photographic season should make this picture by Dr. F. Dettlefson of special interest. Data: Made with a Struss Pictorial Lens; electric light; printed on platinotype paper.



Notice to Competitors

IT is assumed that participants in PHOTO-ERA competitions are glad to co-operate with the Editor, by complying not only with the rules—as set forth in this department—but by supplying the data for each picture, including all the particulars, which are of great interest to our readers. A request, accompanied by a two-cent stamp, will bring to the contributor a number of printed data-blanks. The closing-date of entry is the last day of the month. It is, therefore, useless to start a picture on its possibly long journey to Boston a day or two before, in the hope that it may reach PHOTO-ERA in time. The jury meets and makes its decisions as soon as possible after the closing-date, and belated pictures cannot receive consideration. The work of halftoning pictures cannot be done in a few days, as the pictures must await their turn at the engravers'. It is, therefore, urged that participants do all they can to favor the Editor as well as themselves.

A Back-Hander

CALLER (on being shown photograph)—"So that is your husband, is it? I knew he must be good-looking—your children are so pretty."—*Exchange*.



ON THE GROUND GLASS

WILFRED A. FRENCH



Vocations of Some Photo-Pictorialists

IT is pleasing to have our subscribers so interested in PHOTO-ERA MAGAZINE as to evince a desire to know the permanent or regular activity of some of the successful contributors to our prize-competitions. For instance, some one wants to know how Dr. T. W. Kilmer can spare the time to produce so many admirable portraits. Dr. Kilmer, though an extremely active and successful physician of New York City, is frequently called upon to exercise his ability as a portraitist by his brother-physicians and other members of the medical profession, who then pose as his sitters. Naturally, he makes portraiture a specialty and rarely strays into other fields.

Another reader, impressed with the brilliant ability of Dr. J. B. Pardoe, as a photographer of natural-history subjects, cannot see how this doctor-camerist can find the time and patience to watch the woodchuck, or some other shy creature, long enough to make such remarkable pictures as adorned the July issue. Well; Dr. Pardoe is really an active and extremely successful dentist, but he arranges his affairs so that he can spend his vacation in the woods and fields, in pursuit of his hobby.

Dr. D. J. Ruzicka is another successful physician who, when in need of relaxation, hies himself to Central Park, New York, usually during the warm weather, and produces those charming wood-interiors with figures, that have given him high rank among American photo-pictorialists.

Edward Lee Harrison is by profession an architect, but also an artist. It is therefore quite natural that, in choosing subjects for his photographic hobby, he should prefer buildings of an artistic character.

As to W. R. Bradford, equally and eminently successful as pictorialist and humorist—he earns his daily bread by means of the pencil. He is the “screaming” cartoonist of the *North American*, Philadelphia.

John Paul Edwards is another worker about whom there have also been numerous inquiries as to his actual occupation. As one of the chief buyers of a large Western department-store—which profits by his artistic taste—he travels frequently, and in this way, is able to discover and capture with his camera many of these extremely artistic landscapes that entitle him to rank high as an American photo-pictorialist.

George W. French is identified prominently with the Boy Scout movement, having under his constant charge several hundred boy scouts. Naturally, this takes him into the open and, with his ardent love of photography and artistic temperament, is enabled to create many of those beautiful landscapes improved by human interest, with which he occasionally favors readers of PHOTO-ERA.

Now comes another class of camera-artists who put their technical skill and eminent business-qualifications to such good use as to become managers of photo-departments in some of our large photo-stockhouses or department-stores. Among the most successful of this class of workers is J. W. Newton, who has risen from the position of manager of the photo-department to president of the Capitol Camera Company, Columbus, Ohio. Mr. Newton is now right in his element,

and in the enviable position of seeing all that is important and new in photographic apparatus and material. His success should serve as an incentive to camerists eager and ambitious to fill a similar position in mercantile business or in the photographic industry, and one that shall enable them to follow their hobby as much as may be deemed expedient.

It will thus be seen that a number of camerists much larger than is generally supposed occupy positions in business and in the photographic interests that enable them to indulge their hobby with more or less pleasure and success. Of course, those camerists who have a good all-around-knowledge of photography, united with a gift of salesmanship, adaptability and other desirable qualifications, can always find good positions with photo-stockhouses and elsewhere, which will enable them to exercise their hobby—at least, occasionally.

Matt is a Good Fellow

SUBSCRIBERS who read PHOTO-ERA, literally from cover to cover, are much interested in the Editor's suggestion to manufacturers and dealers that they drop the German trade-name “matt,” and substitute the good, plain English equivalent, “mat.”

An English manufacturer of a well-known mat-surface paper, having noted our first editorial referring to this interesting subject, writes that he will avail himself of this valuable and patriotic suggestion as soon as his present stock of labels is exhausted. He further explains that he was under the impression that the term “matt” was a trade-name that could be used without restrictions, hence he adopted it. He did not hesitate to add, however, that he rebukes himself for not having looked into a German-English dictionary, where he would have found that the word “matt” was the original German adjective for a surface—paper, leather or metal—of a dull character, and that the English word placed against it was our simple, common, little word, “mat”!

Another subscriber, but of a humorous turn of mind, writes that in his camera-club, Matthewson (called for short, “Matt”) is the most popular member, and hopes that members of other camera-clubs, whose names are Matthewson, Matheson, or Matthews, or those whose Christian names are Matthew—all being referred to as “Matt”—are as versatile and popular as “Matt” of his own club.

Chemical Stains on Finger-Nails

IT is all very well to publish a recipe for removing chemical stains on one's finger-nails when, to the writer's personal knowledge, there are several professional craftsmen who have no desire whatever to restore their finger-nails to their original condition after they have been stained by chemicals. They maintain that developing-stain on the hands, advertises to casual observers the fact that the ones with these discolored fingers are professional photographers. Rather a peculiar way to advertise—we should say!



ANSWERS TO QUERIES



C. G. K.—To remove inks from a negative is not a very difficult matter. If ordinary ink has been used, it can be removed by soaking the negatives in a two- or three-per-cent solution of oxalic acid and then washing the negative thoroughly. If the ink has been applied by a pen, it is possible that the surface of the film has been injured, in which case nothing will remove the lettering entirely.

W. J. F.—Several different tones may be obtained on self-toning paper. Various shades may be had according to the strength of the negative used, the depth of the printing, the concentration of the hypo-bath and in other ways. For instance, the prints may be given a bath of salt and water before toning which gives an entirely different color, and there are various toning-processes also applicable to the paper.

N. D. T.—There is no substitute for hypo, and no satisfactory substitute in the ordinary course of photography for water as an eliminator of hypo. There are several hypo-eliminators which are reliable and will not damage the negative; but some claim that years afterward the negative shows the effects. For rush work a good hypo eliminator is a valuable asset; but there is nothing that equals water. There is no reason why there should be an immense wastage of water if the washing is done properly. It is an easy matter to wash a film or a plate that is lying flat in a tray. This may be done by covering it with clean water, leaving it for a minute or two, then emptying out the water and draining both the negative and the tray, lastly, refilling the tray with clean water and repeating this operation twelve times. For a $3\frac{1}{4} \times 4\frac{1}{4}$ negative, this need not require the use of more than about a quart of water—surely not an extravagant quantity.

R. S. A.—To develop and fix in one and the same tank is not advisable, *unless* the plate-rack or the tank be scrupulously cleaned *before each* operation. The slightest trace of hypo will spoil the developing-solution, although after a good rinsing of tank or rack, as well as of the plates or films, it is perfectly safe to proceed to fix. Unless washed away, the developer is apt to discolor the fixing-solution, and after a while impede its action. The best way is to have one tank or tray for each operation. Each should be marked distinctly, so that it cannot be mistaken for another. But the ideal way is to have three receptacles—one each for developing, rinsing and fixing. Although they occupy more space, they combine the elements of safety, cleanliness and expedition.

H. B. B.—To eliminate objects in the negative that impair the harmony or the composition of the picture, by retouching or other means, is not considered faking or illegitimate, provided it be done skilfully. To do it badly, so that the attempt to improve the picture is obvious, not only has the opposite effect, but it reflects discredit upon the technical ability of the worker.

L. W. W.—To block out a window in making a darkroom, the best plan is to stretch over the frame you have made some cheap fabric; it does not matter very much what this fabric may be. A cheap lining or

unbleached calico will do. After you have tacked this tightly stretched cloth to the frame, paste two thicknesses of heavy brown paper on the cloth. Be sure to let the first thickness of paper dry well before applying the second.

S. W.—It is a mistake to use a zinc or bare metal tank for developing and fixing unless it is nickel-plated. All you can do now is to clean the tank thoroughly by scrubbing it with a stiff brush, soap and water. Be sure to rinse the tank carefully, dry it and then give it two or three coats of Brunswick black.

B. A. F.—To set the pointer of your diaphragm-shutter to intermediate places between those marked on the scale will not injure the shutter in any way. However, it must not be assumed that if it is set midway between any two speeds that it will give an exposure exactly between those speeds. The only way to find out is by actual measurement of the exposure with the shutter set at the position desired.

H. P. S.—To obtain suitable material for the blind of a focal-plane shutter is a difficult matter. You might try the thinnest single-proof gossamer sheeting that is obtainable from any large rubber-goods manufacturer, but we think that it would be better to send the shutter to a competent camera-repair expert. If the fabric in your shutter is not in very bad condition try painting it with a solution of India rubber in bisulphide of carbon with enough lamp-black mixed in to fill up the holes.

A. L. L.—A condenser is composed of two condensing lenses—usually plano-convex—a sheet of finely-ground glass is interposed between them. This not only obscures scratches and other defects on the condensing-lenses, but helps to produce enlargements of superior quality. It is not desirable for any but an optical expert to try to remove scratches, or abrasions, by rubbing with gritty substances such as emery-powder.

T. F. O.—Rapid rectilinear lenses are well adapted to landscape photography. Although we advise every camerist to purchase the best possible lens that he can afford, we can assure you that the rectilinear lenses as made by standard lens-and-camera manufacturers are excellent and well adapted to meet your requirements.

D. A. C.—A good cleaning-fluid is very necessary in the photo-laboratory. Many chemical deposits are difficult to remove from trays and graduates by simple rinsing, yet it is essential to keep such utensils clean to avoid loss through contamination causing spots and stains. The following fluid will very quickly remove most stains or chemical deposits from trays, bottles, etc., the article needing only to be rinsed with clear water after the fluid has done its work.

Make up a saturated solution of potassium bichromate (which will be about 1 to 10 in strength) and to this add *slowly* about one-tenth its bulk of common sulphuric acid, the exact proportions not being important so long as a strongly acid solution of bi-chromate is produced. This can be used repeatedly until it ceases to act.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



E. O. Hoppé in America

MR. E. O. HOPPÉ, F.R.P.S., the noted English photographer, whose delightfully individualized portraits appeared in *PHOTO-ERA*, ten years ago, and whose portrait appears elsewhere in this issue, is reported to have arrived recently in the United States. According to the *New York Sun and Herald*, Mr. Hoppé is visiting this country for the purpose of "finding its five most beautiful girls and making camera-studies of them." With his highly-developed aesthetic taste and eminent interpretive skill, Mr. Hoppé is likely to select a type of American beauty that is marked by classical refinement and delicate charm. The January-February number of the *International Studio* printed an elaborate illustrated article on the versatile genius of Mr. Hoppé as a photographer, illustrator, designer and decorator along pleasingly original lines. In prefacing his analysis of Mr. Hoppé's artistic proclivities, the writer says:

"Mr. Hoppé has made a study of the artistic possibilities of photography, but unlike most of the so-called 'Artist' photographers, he does not limit himself to ingenuities in the use of mechanical devices as being artistic on the strength of misapplications of his medium. He brings to his management of photography an aesthetic sense cultivated and developed by study of other kinds of art, and by the actual handling of materials used in pictorial expression. He approaches photography from the standpoint of the painter with a knowledge of design and an appreciation of decorative principles acquired—not by learning mere theories, but by practising forms of art in which both design and an understanding of decorative principles are necessary. In this he sets a significant example to other photographers, most of whom unfortunately do not take the trouble to go outside the stock conventions of their profession."

The Pilgrim Tercentenary

THE long-heralded three-hundredth anniversary of the Landing of the Pilgrims, on the Mayflower, at Plymouth, Mass., is now taking place. Owing to the fact that this famous little craft with its one hundred and two passengers landed, first, at Provincetown, Cape Cod, on the 11th of November and, later and permanently, at Plymouth, December 24, it was deemed desirable to celebrate these events earlier during the year, when the weather was more favorable.

The celebrations were begun in August and continued during September and October. Be that as it may, tourists will continue to arrive long after the last observance. Indeed, there will be not a few visitors who will want to survey the famous places at the very time they were first occupied by the Pilgrim Fathers—i.e., Provincetown on November 21, and Plymouth on December 24—when snow covered the ground. Among the several books that have been published for the benefit of visitors and those who, though interested, are unable to undertake the journey to Cape Cod, the following three deserve serious attention because of their superior merit.

"In the Days of The Pilgrim Fathers," by Mary

Caroline Crawford and published by Little, Brown & Company, leads in respect to accuracy of historical research, interest of subject-matter and beauty of style. The author takes pains to explain the difference between Pilgrim and Puritan—a topic about which there exists much confusion in the public mind. She deals briefly, yet entertainingly, with the early history of the Pilgrims; their first migration; the departure from Plymouth, England (September 6, 1620); the long ocean-voyage, and the terrible first winter at Plymouth. She dwells at length, however, on the relations of the Pilgrims and the Indians; the way the Pilgrims made their laws and lived up to them; how they established "Freedom to worship God"; on the religious tolerance of the colonists, and their social life and customs. Of literary value to students of the Pilgrim-story is the chapter devoted to early books written about Plymouth. The many photographs that adorn the volume are carefully selected and are technically admirable. Throughout the work, the author shows praiseworthy pains to present the most important landmarks along the coast between Boston and Plymouth, so that the reader feels that, so far as sight-seeing is concerned, his expectations are fully met. The price of this book is \$3.00.

"Old Plymouth Trails," by Winthrop Packard and issued by Small, Maynard & Company, is a book of an entirely different character from the purely historical one by Caroline Crawford. It makes an irresistible appeal to the nature-lover, and, with his deep love of the woods and fields and their denizens, and his thorough acquaintance with the entire Cape Cod region, Mr. Packard presents a series of animated pictures along the first Pilgrim-trail. There are sketches illustrated with numerous, fine photographs of beautiful scenery of coast, field, marsh and glade not frequented by the regular tourist, which Mr. Packard glorifies with an artist's pen—paying tribute to an indigenous wild-flower, or some creature of the woods, or a bubbling meadow-brook. He loves the voices of nature, and speaks of them in terms of genuine affection and glowing enthusiasm. They are the voices that greeted the Pilgrim as he entered the dense woods, soothed and cheered him, and helped to sustain him in his faith in God. Mr. Packard's volume can be read with satisfaction either in connection with, or after, Caroline Crawford's book. In either case, it is a timely and fascinating effort and fills its place in Pilgrim literature. The price is \$3.00.

"The Old Coast-Road," by Agnes Edwards, and produced by the Houghton Mifflin Company (price \$3.00), is a delightfully told story of a trip along the shore-road from Dorchester Heights—by way of Milton, Quincy, Weymouth, Hingham, Marshfield, Duxbury, Kingston—to Plymouth Rock. As the author truthfully states, the tourist will meet delightful, characteristic views interspersed with quaint colonial houses, of the 17th century and some modern ones; old-fashioned gardens, well-sweeps, and other picturesque features.

Miss Edwards' style is delightfully intimate, and her little volume—enhanced, as it is, with many artistic and appropriate pencil-sketches—is to be worthily associated with the best literature of the Plymouth Pilgrims.

Milwaukee Photographers' Convention

FROM all reports that have come to us from reliable sources, the convention of the Photographers' Association of America, held in Milwaukee, Wisconsin, August 23 to 28, was a remarkable success. This was due to the energetic efforts of the executive board, headed by President Charles L. Lewis, the support of the photographic press, and the psychological effect of the importance and quality imparted by the increased dues of ten dollars per member. It was but natural that, with increased prices all along the line, the small dues of \$2.00 were entirely inadequate to meet present-day expenses. A further increase to even \$15.00 per member would not be out of place.

The attendance exceeded that of any convention in recent years, although in justice to difficult conditions of to-day, including greatly increased railroad-fares, hotel-expenses, etc., the golden days of the old association, forty years ago, should not be used as a comparison. The attendance at Milwaukee, according to the figures of Treasurer Diehl, was 1,378 photographers, manufacturers and dealers. If to these, 311 ladies and visitors are added, a total of 1,689 is reached.

An outstanding feature of the convention was an up-to-date photographic studio, including darkroom, printing-room, children's camera-room and reception-room. Credit for the planning and construction of this Model Studio, complete in every way, is due to Mr. F. H. Hoeft, of the Eastman Kodak Company, and Mr. Will Armstrong of the C. L. Lewis Studio, Toledo, Ohio.

The manufacturers and dealers were present in force—66, including the leading ones, being sufficient evidence.

The photographic press was represented by *Abel's Photographic Weekly*, *Bulletin of Photography* and *The Camera*.

A pleasant social feature was the presence for the first time since the death of her husband, Gustav Cramer (in 1914), of Mrs. Cramer, or, as she has been popularly known for many years, "Mama Cramer."

Salon Honors

THIS distinction for exceptionally meritorious photographic work was conferred upon the following-named photographers: Frank Scott Clark, Detroit; Gerhard Sisters, St. Louis; T. Kajiwarra, St. Louis; Strauss-Peyton, Kansas City; Richard T. Dooner, Philadelphia; Pasquale Culotta, Baltimore; Will H. Towles, Washington; Lejaren a'Hiller, New York; Howard D. Beach, Buffalo, and Francis J. Sipprell, Buffalo. The judges were Pirie MacDonald, S. L. Stein, and Eugene R. Hutchinson, none of whom was a competitor.

Despite his ill-health—which, however, has improved—Charles I. Lewis presided at the convention. His reputation as a man and American of the highest type, as well as a studio-photographer, lent distinction, dignity and prestige to the convention.

The Trophy-Cup of the Amalgamated Association was won by the Missouri Valley Association.

The next place of meeting was left to the discretion of incoming Executive Board.

The winners of the "Hidden-Slogan" prize were: Mrs. Scholl, South Bend, Indiana; Dalziel Green, Fairfield, Iowa, and H. L. Ryder, Rockford, Illinois. Inasmuch as the correct answer was received from three different sources, the prize, \$100, was divided equally among the three winners. The correct answer was, "Your friends can purchase everything you may give them, but not your photograph."

The commercial photographers formed an organiza-

tion and elected as chairman Charles D. Kaufman, of Chicago. Recognized as a section of the P. A. of A., this new body is now incorporated as a part of the national association.

Woman's Auxiliary of the P. A. of A.

AT the meeting of the Board of Directors of the P. A. of A., a ruling was made that no dues shall be collected from the Woman's Auxiliary. As the Auxiliary is now a part of the P. A. of A., the expense for carrying the Auxiliary and its work will be paid by the P. A. of A. Every woman who attends the National Conventions, as a member, or who attends as a relative or business-associate of a member; or who is a manufacturer or dealer; or who is a relative or business-associate of a manufacturer or dealer, may become a member of the Woman's Auxiliary by sending her name to the secretary, Alice W. Chambers, 7321 Boyer Street, Mount Airy, Pa. The Auxiliary's business is to look after the welfare and comfort of the women who attend the Conventions; to promote real friendship among its members, and to work, in any way possible, for the progress of photography. The business-meeting was held August 26, Mrs. W. H. Towles presiding. Clara Louise Hagin, of Chicago, was elected third vice-president in place of Mamie Gerhard, who retired after faithful and efficient service. The members assisted in the preparation of the Model Studio, furnishing the women's rest-room, and, under the leadership of Mamie Gerhard, exemplified the work of the ideal receptionist. Full particulars of the work done by the Women's Auxiliary at the Milwaukee Convention, together with information regarding the future of this eminent body of photographic workers, will be gladly furnished by the secretary, Alice W. Chambers.

A. J. Voorhees—Exhibitor

AN occasional participant in PHOTO-ERA competitions, A. J. Voorhees, whose article of special interest to apartment-dwellers with photo-chemical activities appears in the present number, has been a successful contributor in several prominent exhibitions, this season. His pictures were hung in the following shows: Pittsburg Salon; Brooklyn Institute of Arts and Sciences; Bangor Salon; Copenhagen Salon, and Toronto Salon.

Unique Photograph Business For Sale

A GOODLY sum can be realized by a smart photographer—professional or amateur—with a little capital, business-ability and energy—as well as an active picture-dealer or art-publisher who will simply continue a highly-profitable business that was interrupted by sudden illness of the proprietor. It is the production and sale of photographs of beautiful, white Angora kittens, of great popular appeal. These handsome creatures appear in poses that are serious or comical, the expression being irresistible. The pictures are of the highest artistic and technical merit. The author and owner of the negatives, Charles E. Bullard, of Peterborough, N.H., long and favorably known to the publisher of PHOTO-ERA, and unable to resume the business on account of ill-health, wishes to dispose of the entire stock of several hundred original negatives, copyrights and goodwill. The intending purchaser should act quickly, if he wishes to take advantage of the approaching Christmas-trade. See advertisement in this issue.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

THE FUNDAMENTALS OF PHOTOGRAPHY. By C. E. K. Mees, D.Sc. Illustrated with photographs and diagrams. 111 pages. Octavo. Price, \$1.00. Rochester, N.Y.: Eastman Kodak Company, 1920.

This little work has been written by one who ranks high among men in photographic science, but with the object of providing an elementary account of the theoretical foundations of photography, in language which can be followed by readers without any specialized scientific training. It is true that most amateur camerists work without any knowledge of the character of the materials they use, and of the reactions which those materials undergo in the optical and chemical processes—from the moment the image is formed by the lens until it appears as a finished, permanent picture. The worker who is interested to know by what scientific means he obtains the results that delight his friends, will find the little book prepared by Dr. Mees a veritable Pandora's box; for with admirable clearness and brevity, and aided by numerous illuminating photographs, the author epitomizes the salient features of photographic practice in the following eleven chapters: The Beginnings of Photography; Light and Vision; Camera-Lenses; Light-Sensitive Materials; Development; The Structure of the Developed Image; The Reproduction of Light and Shade; Printing; Finishing the Negative; Halation; Orthochromatic Photography. That a copy of this important little work, by Dr. Mees, and the technical product of the Eastman Kodak Company, will form a part of every amateur worker's equipment, is a safe prophecy.

THE COMMERCIAL PHOTOGRAPHER. By L. G. Rose. Quarto ($8\frac{1}{2} \times 11\frac{1}{2}$ -inches). 147 pages. Profusely illustrated with original photographs. Price, \$4.00. Philadelphia, U.S.A.: Frank V. Chambers.

This is by far the best book published on the subject of commercial photography. It is written by an expert-photographer in commercial work, who is likewise a capital writer. The volume deals with the following subjects: Equipment; Lenses; Plates and Films; Exteriors; Interiors; Banquets; Panoramas; Machinery; Automobiles and Trucks; Store-Windows; The Studio; General Merchandise; Furniture; Stoves; Monuments; Cut Glass; Silverware; Legal Photography; Photographing Colored Objects; Copying; Enlarging; Darkroom-Work; Blocking; Staining and Lettering; Printing; Blue-Prints; Vandykes; Photostats; Prints and Coloring; Advertising-Photographs; Prices; and Building Business.

A careful examination of this admirable work convinces us that the object-lessons here presented constitute in themselves a real course in commercial photography, which appeals not only to the student interested in this department of photographic work, but to the commercial photographer or, as he is generally called, the all-around photographer.

The text presents all up-to-date methods, tricks and

dodges that are known only to a thoroughly experienced commercial worker, and describes every step, from the choice of equipment down to the finished print, whether the latter be a straight contact-print, an enlargement, a colored print, or one that is worked up to suit the needs of the photo-engraver. The book is printed on the highest grade of coated paper, in large, clear type, and is a credit to the printer's art. We heartily recommend this book to every photographer interested in producing technically perfect pictures for the merchant, the architect, or whoever calls for the most exacting photographic work. Copies of the book can be obtained from PHOTO-ERA at the regular price.

All-the-Year-'Round Photography

"ALL-THE-YEAR-'ROUND, photography" is what we all believe in, that is to say—those of us who are sufficiently acquainted with the subject to know its uses and its charms. But what is wanted is, that the casual snapshooter should be educated up to this knowledge and belief and then the business of photographic dealing would be freed of that bug-bear—the slack winter-months. With commendable foresight, Messrs. Butcher and Sons, Ltd. have adopted the phrase, "all-the-year-'round photography," as a sort of slogan, and they are issuing booklets and show-cards to bring this home to the very class who need to be taught its meaning and its intrinsic value. The habit of putting aside the camera at the end of September is, unfortunately, not confined to the snapshooter; and many dealers, who ought to know better, adopt precisely the same policy. In the early autumn, windows that have been gay with cameras and photographic displays during the spring and summer months are destitute of anything of the kind. Could a worse policy be adopted? Surely it is up to the dealer to show by his window-display that there is much for the cameraman to do in the dull days and during the long evenings of the winter-months.

A little consideration will show the dealer that a little display of enlargers and lanterns, side by side with cameras and specimens of their results, will be likely to induce the amateur worker to continue his operations after the sun has disappeared. The display of a few good enlargements with the original print attached will do much to create a desire to go and do likewise. Those dealers who have hitherto handled photography as a side-show or a season-trade, should ask themselves what dealers who confine their trade solely to handling photographic supplies, do in the autumn and winter months. Go out and look at their windows, they will not find the shutters up. Those are the dealers who do something to further the industry, and by doing that they increase their turnover and profits. Several of the leading photo-dealers find that their sales keep up to the normal right up to Christmas, and after a few dull weeks in January the trade opens up again and goes on merrily right through the year. Let our readers take the slogan, "All-the-year-'round photography" to heart now and work it for all it is worth. It will repay all that is put into it a hundredfold.—*The Photographic Dealer.*

Billy Sunday as Art-Critic

We read in an esteemed evening-paper the following announcement, "Sunday talks at the Art Museum." Interested to see how much Billy knew about art, I read the statement proper, and found that there were to be Sunday-talks by different art-experts at the Art Museum. Billy Sunday was out of it.



LONDON LETTER

CARINE AND WILL CADBY



BEING in Switzerland on a short summer holiday it may not be out of place to mention a new book on ski-ing called, "Das Skifahren," by Adolf Zarn and Peter Barblan (published by Arnold Bopp and Co., Zürich, at twelve francs). As all the world knows, Switzerland has snow-covered frontiers in more than one direction, and earnest attention has been given by the authorities to the training of ski-ing soldiers. This book embodies the results right up to date of the military drill designed solely to make men handy and quick, and absolutely at home on ski in all conditions of snow, and on every variety of ground, and marks a big departure from the idea that has of late years been predominant, viz.: style must come before all else in ski-ing. The authors even suggest that in a few years' time, the much admired telemark turn will no longer be the vogue, and that runners will swing around with a jump, as they are now being taught to do at the Swiss Military Ski-School.

These revolutionary ideas are demonstrated convincingly by no less than *one hundred and eleven photographic* illustrations. Indeed, one might say the book seems all illustrations, although there is a good deal of reading-matter, as well. It is an excellent example of photography used exhaustively to propound a series of exercises that not only lead up to good ski-running, but are in themselves a complete athletic training; for it is intended that they should be practiced on snowless earth, and at any time of the year.

The doctor at our hotel is an Armenian, and knows more of Turkey, and the Caucasus in particular, than of the rest of Europe. He is familiar with persecutions and attempted extermination of his race. When he saw our Sanderson half-plate camera, he exclaimed—not without difficulty and much searching for his few English words—"Oh, you do Kodak?" We assented, and smiled to ourselves at the way the copyrighted word of the great camera-firm must have forestalled, or supanted, the term "photograph" in the Middle East.

There are many photographic facts that we all know by heart, and yet do not realize the importance of in practice, until they are brought to our attention by an extreme example. We have just had such an experience in the matter of temperature in development. In our photography, this summer, we are using the same brand of plates (Kodak Portrait-Films) as we employed in January last at this same high mountain-village, and again Kodol is our developer. The temperature of the darkroom and the water, in January, was fairly low, and it took usually more than twenty minutes with correct exposure and normal strength developer to obtain proper density. We began our work here, this summer, in a hot spell of weather. The spring, some miles further up the valley, from which the hotel-water is brought in pipes, had got warm in the hot sun and, in consequence, the developer was at a high temperature. In five minutes, we obtained full density with all factors exactly the same as in winter, with the one exception of temperature. A week or so later, after a period of rain-storms and cool weather, we found ten minutes none too long for development, using the water as it came directly from the mountains.

Of course, the reader has the right to point out our

carelessness in not carefully testing the temperature of the water both in summer and winter, and artificially rectifying nature's extremes. No doubt, it should have been done, although the traveling camera-man in Europe has quite enough to do to get his impedimenta of cameras, lenses, screens, plates, developer, hypo, etc. to the desired destination without any more complications. But apart from this, it emphasizes the already known, but not always realized, fact of the immense importance of temperature. And all the while the old-fashioned method of development is adhered to, and a sharp and experienced eye is kept on the progression of density, little trouble need be feared, the process simply being slow in cold, and fast in hot weather. The danger only arises if we have not fully grasped the importance of temperature.

The *Daily Express*, of London, has been testing Mr. Thorvald Andersen's invention of transmitting and reproducing photographs over any distance. Mr. Andersen, who is a Dane, has been interested in long-distance picture-transmission for some years, and, apparently, has evolved a system that makes it possible to telegraph, or wireless, or telephone as far as telegraphy, wireless or telephone can work. That is to say, there is no earthly limit to the distance over which a photograph can be telegraphed, for you can telegraph right around the world. The method is at present a secret, and the patents are being applied for in all countries. But, judged by the pictures shown as having been telegraphed from Copenhagen to London, it depends on the sharp contrast of light and shade, and they are obviously reproduced by photographic means. The person who transmits the photograph has first to emphasize the shaded parts of it, and then write out a code message according to the system. The person who receives the message has to decode the words into terms of light and shade in picture-form.

The experiment was made in the following way. While Mr. Andersen was crossing from Copenhagen to London with his apparatus, the *Daily Express* selected three photographs and sent them from London to Mr. Andersen's brother in Denmark. Mr. Andersen did not see the photographs, and did not know whose photographs had been chosen. Mr. Andersen's brother, using the system invented by Thorvald, sent to the *Daily Express* three cables in code—one for each photograph. Mr. Thorvald Andersen, on being handed the three cablegrams, locked himself in a darkroom of the *Daily Express* photographic studio, and by means of his apparatus translated the cablegrams into three pictures, which the *Daily Express* reproduced. They are of the King, Mr. Lloyd George, and Miss Irene Vanbrugh, and there is no denying that they are likenesses. We are told that decoding the message into terms of light and shade in picture-form takes from one to two hours, and that a single wrong word or letter would alter the picture. The cost of transmission is just the cost of the telegram, wireless or telephone message, and if the code-message is sent correctly, the exact reproduction of the photograph is assured. It is all very interesting, and the photographic outsider's curiosity is naturally directed to how Mr. Andersen spends that hour or two, locked in the darkroom, when he is developing his long-distance pictures.



WITH THE TRADE



The Heyde Exposure-Meter—New Model

THE new model of the Heyde Exposure-Meter, of which Herbert and Huesgen Company, 18 East 42d Street, New York City, are the sole agents for the U.S.A., is a small, simple, practical and an effective optical instrument. It utilizes an optically and spectroscopically corrected blue glass-wedge or prism; and enables the photographer to obtain by direct visual observation a mathematically accurate and scientifically correct measuring of the reflected actinic light which comes from the subject. It is cylindrical in shape, constructed of aluminum, is $2\frac{3}{8}$ inches in diameter and but $\frac{3}{8}$ of an inch in thickness. Our long acquaintance with the Heyde Exposure-Meter enables us to assure readers of PHOTO-ART that this meter does what is claimed for it and merits the popularity which it enjoys.

Rexo Dupli-Kit Mask

THE Rexo Dupli-Kit Mask is a thin metal-mask that fits in the back of the camera over the bellows-frame and masks off the opening so that a picture one-half the regular size may be obtained when Rexo Film is used. With this mask twelve pictures, half the regular size, are made on a six-exposure roll, twenty on a ten-exposure roll and twenty-four on a twelve-exposure film. The Rexo Dupli-Kit System may be used in all popular hand-cameras with a Rexo Dupli-Kit Mask and Rexo Speed Film of corresponding size. Further particulars may be obtained from the manufacturers, Burke & James, Inc., 240 East Ontario Street, Chicago.

Sharp Pictures Without Focusing

THERE are many persons who have no ear for music; others who have no sense of rhythm; others who have no idea of dimensions, and again, those who have no idea of distance. This latter faculty is of great importance in outdoor-photography. When the camerist focuses the object on the groundglass and his vision is normal, and nothing happens to move the object or the camera during the exposure, he will get a sharp picture.

The use of hand-cameras, however, imposes the task of estimating the distance of the object to be photographed, whether it be a person, a group, a building, an animal or a tree. To determine the distance by means of a tape-measure, or by pacing it, isn't always convenient. It certainly consumes much valuable time, and is otherwise impracticable.

But here we have a little device—MacMillan's Distograph, which taken from one's vest-pocket, is held by one finger between the eye and the camera-subject and in a few seconds the accurate distance is determined. We used this handy little contrivance, recently, and were astounded at the ease, closeness and accuracy with which a correct distance of an object—near or far away—could be determined. No camera-user should be without one. There is no chance of using a rival contrivance of this sort, because there is but one, and that is MacMillan's. It is advertised in this issue.

Lens-Cleaning Tissue—a Wollensak Product

THE proper cleaning of photographic lenses is a thing that sometimes puzzles even the best of photographers. A very satisfactory method is to use the Wollensak Japanese Tissue. This material is made from the bark of the Japanese Mitsumata and, being free of any abrasive tendency, is admirably adapted to cleaning lenses. It is put up in booklets of small, convenient size, with sixteen pages of tissue to the book. They contain definite directions for cleaning lenses, and can be obtained at all dealers in photo-supplies, otherwise from the company direct for twelve cents postpaid.

Japanese Water-Colors

SOON, the long winter-evenings will give the camerist the necessary leisure to sort and arrange his vacation-pictures. In so doing, he should not lose sight of the opportunity to select prints that are suitable for coloring. No doubt, he has many pictures that were made during the autumn-season, when the woodlands and hills were glorified by the beauty of autumn-colors. The carefully prepared and convenient colors, made by the Japanese Water-Color Company, Rochester, N.Y., are especially suited to the needs of the camerist, and will yield eminently satisfactory results.

A good plan is, after having secured the multi-colored autumn-view, to make an outline pencil-sketch of the subject and, with Japanese Water-Colors, briefly indicate the colors as they appear in nature. This color-guide may be used any time afterwards, in coloring a photographic print of the original negative.

Sel d'Or

FOR the benefit of the younger generation of Camerists, Mr. G. A. Wright in *The Amateur Photographer* explains what is meant by sel d'or in old books on photography. It was a double hyposulphite of gold and sodium, and at one time enjoyed a good deal of popularity as a toning agent for silver paper, the bath being made by dissolving the requisite quantity of "sel d'or" in water and adding a trace of hydrochloric acid. Although hyposulphite existed in the bath, it was only present in a very minute proportion, and after toning the prints had to be separately fixed.

For many years now "sel d'or" has not been obtainable. It is easily made up, however, by mixing solutions of hypo and of gold chloride in the proportion of three parts of hypo to one of gold. What is the equivalent of the old "sel d'or" toning bath, for example, can be got by dissolving five grains of gold chloride in half a pint of water, fifteen grains of hypo in another half-pint, and then stirring the solution of hypo vigorously while pouring the gold into it. Twenty drops of hydrochloric acid added to the pint of bath so made up give the working solution, which, although it was originally designed only for albumenized and plain paper prints, is quite suitable for printing-out paper.

The prints after toning should be rinsed and immersed in a weak solution of bicarbonate of soda before putting them into the hypo.

NOVEMBER

1920

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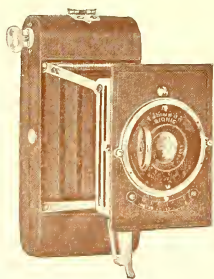
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The American Journal of Photography

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Traveling with a Camera

O. C. GOULD



ANY persons who value cameras as traveling-companions seem too ready to assume that while traveling they may depend on facilities as good as those at home. To do this, is to court disappointment. In a dozen years of foreign travel and residence I have witnessed as many cases of inconvenience. What is more, despite efforts to accommodate my provisions to the circumstances, I have frequently been unable to photograph what seemed to me very interesting or have had negatives of which I held high hopes ruined by unskilled foreign operators. Incidentally, my mishaps have not all occurred abroad, for out-of-the-way places in the United States still hold possibilities for photographic distress.

Though photography is becoming much more universal, there are certain precautions to be recommended to travelers who, like myself, prefer not to follow the beaten track. If it is practicable to do so, obtain information in advance as to stocks of photographic materials and the opportunities for professional assistance. If the field to be visited is small, this may be easy. More often, it is not. Therefore, I have found it wise to arrange beforehand with a reliable professional in a position to give the best of service for handling my developing and printing. In addition to this, I procure printed labels for my mailings of exposures which will make it obvious to postal and customs authorities that these are not to be opened in unsafe light. I choose operators favorably placed for making customs-entry, minimizing the trouble as much as possible. Sealed and sent by letter-rate, my shipments have often caused the consignee personal inconvenience. There is often as much trouble when sent under a lower postal classification and not as much protection against ignorant handling.

After making this, as other preparations, one

is always free not to avail of them if greater conveniences are met than could be counted on. However, abroad as at home, one greatly reduces the chances of failures by sticking to a professional whom experience has shown to be both resourceful and careful. Too often it is not possible to replace negatives lost by poor treatment in development.

The average amateur cannot count, as a rule, on doing his own work *en route*. Compact as are some of the contrivances and some packages of chemicals, they are all too cumbersome in many places. All sorts of disadvantages must be overcome. For instance, one often cannot get the desirable temperatures for solutions or sufficient water thoroughly to rinse chemicals out of negatives and prints. Inability to get ice, and attempting to work without it on my first trip to the tropics, ruined a lot of films I thought most valuable. I much prefer now to send my exposures to skilled hands having the best facilities. Of course, circumstances alter cases and what has seemed best for me may not be for others. I only urge due consideration of all possibilities in advance and intelligent provision for them.

Probably, most mistakes are made in the picture-making outfit carried. Personal preferences interfere with giving helpful advice on this subject. I have always disliked films and especially roll-films; but after years of dogged resistance had to surrender to a 3A Autographic kodak. My bulky quarter-plate camera became a white elephant (though it chances on this trip to be the only size for which plates are locally obtainable). The weight of plates drove me to using flat cut films and film-packs with it. But before yielding this murch, I bought a baby Goerz (Vest-Pocket Tenax) to use the smallest size of plates. I reasoned that these reduced the bulk sufficiently, while leaving me the possibility of having desirable exposures enlarged in



THE CHURCH BEYOND

G. H. SEELIG

printing. It was quite a satisfactory outfit except that, practically without exception, I could not find this size of plate in stock abroad and at home only in the largest cities. There was considerable difficulty in foreseeing my needs and keeping a stock of fresh plates, so I invested in a small camera using film-packs. The packs were satisfactory, but I found them stocked as poorly as had been the plates for my other instruments. So, after carefully watching stocks in many parts of the world, I yielded to my pet aversion, finding 3A ($3\frac{1}{4} \times 5\frac{1}{2}$; #122) roll-film not only most available but, having the best turnover, most likely to be fresh.

It is often the best plan to carry one's supply, as well as to arrange with a home-dealer for forwarding additional supplies. Especially is this so when using other sizes or mediums than this roll-film and when going to countries which are, at least from a photographic standpoint, undeveloped. Always insist on getting stock prepared for export. It used to be protected by tin containers against humidity, etc., a container far more satisfactory than the one now

used. The present one is not serviceable for use with exposed rolls, though I believe it must be fully as expensive. Films and plates not well protected can deteriorate with astonishing rapidity in regions tropical or otherwise unlike those at home. By getting fresh supplies from home, the annoying inability to keep in stock may be avoided and one does not have the discouraging risk run in using materials which, if not stale, are not what they should be. A traveling friend of mine has fresh supplies mailed at frequent intervals, realizing that merchandising abroad is rarely of the sort one can rely on in San Francisco, Chicago or Boston.

I would say never to carry a new instrument or one with the peculiarities or limitations of which you are not completely acquainted. If you are breaking into photography as you go away, do not do so with an expensive lens. The chances of failure are heightened. Nor should you, on the eve of departure, shift from the R. R., which has stood by you, to an anastigmat F/4.5, because your batting-average will be lowered even if you make a few scattered fine hits. I've

known many who've courted and gained disappointment in this way, through choosing other traveling companions from tried acquaintances.

It is an admirable precaution to carry those things with which you can keep metal parts from tarnishing, mend broken or cracked bellows, restick leather-coverings to their supports and otherwise maintain your outfit in good condition. In moist climates, the lenses will often sweat and need attention, and metals rust quickly if not cleaned carefully and oiled at frequent intervals. This does not mean oiling the shutter, however. Caution must be used in some localities about leaving the camera, or similar articles, in a carrying-case for this seems to aggravate destructive forces rather than guard from them.

On the other hand, carry as little as possible. Impedimenta become more and more troublesome as a trip advances. Every one must decide for himself what to leave out. I have left wide-angle and telephoto lenses behind, to want them keenly when thousands of miles lay between them and myself, and carried them almost around the world without using them at all. Maybe you can plan better. Study travel-books and try to anticipate your needs. Prevision is better

than regret and gratifying negatives than unusable opportunities.

In traveling, one particularly needs a reliable gage to light values and timing, something rarely provided by amateurs so far as I can judge. Luck may lead you to hit it off right but it doesn't do so for me. When I guess, I'm gone. I've assumed there was greater intensity and lighting value in the tropics, later to find hopeless underexposure, and vice versa in Labrador and Newfoundland. I'm only a novice, sticking to gages and tables, but I've met several superiors who've bemoaned the fact that they did not. If one remains in a region for a time one may become a good judge of light values, but jumping from Vancouver to Tabriz, or from the Straits of Belle Isle to the Isthmus of Panama, it is best to rely on the best guides procurable.

I've acquired great awe for the press-photographers who must attain high efficiency regularly in whatever district orders land them, despite having to do most of their work on the spot regardless of handicaps. They carry gear which the amateur cannot, to be sure; but are successful, I think, accordingly as they have been foresighted and forehanded. The same qualities will give the amateur delightful results.

Tank-Philosophy

E. C. L. MORSE



SOME years ago I was foolish enough to get into an argument. Worse than that, it was an argument on photography. Still worse, it was about tanks. And worst of all, it was with a salesman of a supply-house. The tank was relatively new as a commercial proposition, and the young man was red-headed (literally so in the beginning and figuratively so later on)—one of those amiable, perfectly proper, young persons whose enthusiasm was equaled only by the profundity of his ignorance. I think he sold clothes-pins, hair-dye and crockery before he got a job to sell photographic goods over a counter. I don't know what would have happened if the proprietor had not just then showed up and put a *quietus* on the red-headed enthusiast—and myself. I went over to the Camera Club and told the fellows about my adventure and they laughed at me for being so foolish as to try to tell a photo-supply clerk anything about photography. A good deal of water has flowed under the bridge since those days and most

people who know about photography have made up their minds about tanks. But I meet every once in a while a wild sort of a statement in photographic journals about tanks, and I often wonder whether the man knows what he is talking about. In talking about tanks, some people adopt a tone of inerutable profundity. Other people speak of them with hushed breath as if of Einstein's Fifth Dimension, or of the Grand Lama of Thibet. Well, just what is the truth about tanks?

The tank is *prima facie* merely a receptacle for holding the developer. Anything that doesn't leak or affect the developer, will do. Other things being equal, a negative can be developed just as well in a pie-plate, a dish-pan, a wash-boiler or a horse-trough, as in a so-called tank. Some tanks are used vertically and some are used horizontally. Some are round, some square. Some have covers and some have not. If the reader will consult the *British Journal's Almanac*, he will find a great variety of tanks for photographic purposes. Some are so arranged

that the liquid can be introduced through a light-tight trap, with a faucet for letting the used developer out, so that the emulsion may be washed and hypo introduced without touching or removing the sensitive surface. Others are simply high jars of stone-slabs where the negative is suspended in the liquid from the top. There is absolutely nothing marvelous or miraculous about a tank. It is about as simple and primitive as a coffee-pot—and, like a coffee-pot, the results depend on the ingredients and their manipulation.

Inside of the tank is a contrivance for holding the emulsions so they shall not touch each other on the sensitive surfaces during development. For plates, there is a rack, the mate of which can be seen in any glazier's store. Nothing marvelous about that! For film-packs, there is a perforated disk in which you insert the rolled emulsion. The affair is just about as miraculous as an umbrella-stand! For roll-films, there is a long ribbon that encloses the long strip of film. In operation, it is about as simple as winding up a kite-string or a fish-line on a stick. Others have a trough, half the length of the film in which the film is laid, doubled.

In transferring the plates from the holder to the tank, or the film-packs to the tank, there must be complete darkness. In transferring the ribbon with enclosed strip of film to the tank, complete darkness is desirable. The less light, the less danger of fogging the emulsion. There is "day-light" and "daylight"; the operation is feasible in very dim daylight; it cannot be done in sunlight.

Along with the tanks go certain powders for developing. In the booklet of instructions you are told to mix so and so, at such and such a temperature, and develop for a certain number of minutes which we will call x minutes. Now x minutes represents a good general average for correctly exposed emulsions for average purposes. In short, it comes more or less near the general average of negatives in the long run. For anything out of the ordinary, it is unfitted by nature.

The whole affair reminds one of the classical myth—let us hope it was a myth only—of Procrustes. In ancient Greece, an innkeeper named Procrustes had a bed for travelers. It was of the right size and dimensions for the average man, but it was not fitted for unusual cases. Whenever Procrustes had a guest who was too long for his bed, he proceeded to adapt the traveler to the bed by chopping off enough of his anatomy to make him fit the bed. If the man was too short, suitable mechanical contrivances were arranged to stretch him out until he did fit the bed. The arrangement worked excel-

lently for nine out of ten men; but it was awfully tough on the tenth man.

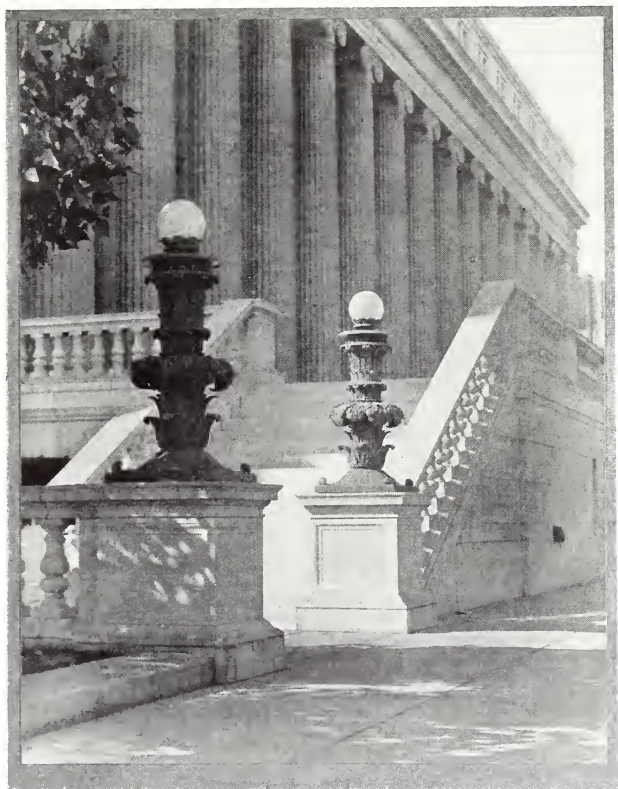
The tank is the Bed of Procrustes of modern photography. Let me give a specific instance. There are a few spots in the city of Chicago which under certain conditions are really very beautiful. I doubt not that that is true of every city; but I am discussing now things with which I am most familiar. Michigan Avenue seen in the glare of midday is horrid—a long row of high, square office-buildings, for the most part, with few redeeming features: enormous boxes set on end, with holes for light and air punched at intervals. Practical, useful, hideous, staring monstrosities from an artistic point of view, as a general rule. Yet, when there is a slight mist in the air, with wisps of cloud streaming across the face of those enormous structures, veiling their coarse and ugly outlines and suggesting their massive and imposing grandeur, the view is of surpassing beauty.

It is possible for the photographer to measure the actinic power of the light of such a scene with scientific accuracy. But to render the essential softness and grandeur of the scene requires, among other things, very skilful development—what in photographic parlance is known as "development for soft contrast."

Take another scene along the same avenue. The war is over and the returning veterans are parading with the blare of trumpets, the flapping of banners and the flash of guns. The General, all gold-braid, on a prancing steed. The doughboys, erect and proud, the marines with their easy rolling march; the nurses with their mantles turned back to show the scarlet lining; the shining artillery drawn by that most lovable but intractable animal known as the U. S. Gov't mule. Anything wistful, mysterious with veiled suggestion like the first? Not at all. It calls for sharp contrast, clean-cut, and aggressive.

Your tank-formula calls for twelve minutes, we will say. If you know your business, you will develop the first picture for about nine minutes and your second picture for about fifteen minutes. There is a variation of twenty-five per cent to produce an effect consonant with the character of the scene. Reverse the process and you have two ruined pictures. Stick to the tank-formula, and you have missed half the effectiveness of the interpretation. For, after all, good art, including photography, is interpretation of a scene as it appears to the mind of the artist. The tank is not an artist.

If you make a careful study of the actinic power of light, using a meter to measure it; if your shutter is accurate; if you know the speed of your emulsion; if your scene is neither too



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DENVER POST-OFFICE
E. H. WENDELL

full of nor too destitute of contrasts, then you will get the best negative possible by using the standard time and standard developer. Supposing that your pictures all come under this category, you will find that the tank is the most convenient and easiest method of developing a number of pictures at once, if you are too pressed for time, too lazy, or don't want to be bothered to develop them one by one. What has always most impressed me about the tank is its psychology, not its performance.

Any one who has ever taken notice of the mental attitude of the average novice in photography will have observed how easily satisfied he is at first. The moment he gets his camera, he wants to go right out and make a picture. Then he wants to see the picture right off. He can't wait. He spoils probably half of his films—out of focus, double-exposure or none at all. But he wants to see something that he snapped and he doesn't want to be bothered with a lot of rubbish.

Well, he reads about that wonderful instrument called the tank. He buys one, and the Good Lord only knows what stuff the salesman hands him out in praising the tank. But Mr. Novice takes the marvelous affair home with

him. He gets his thermometer out and uses ice or hot water as occasion requires and has his water just the right temperature and puts in the powders. He hasn't the slightest idea why he does it; but he is greatly impressed. Then he winds and winds and winds. The darkness of his mind is equaled only by the darkness of the winding-box. Then with bated breath—in a dark place, let us hope—he inserts the big spool in the tank, covers it and looks at his watch.

During the ensuing quarter of an hour or so, his mind is filled with mute admiration for the wonderful contrivance he has bought. With feverish hands he washes the bulk and sets it in the hypo. And then, oh Glory! "Come here quick, Liz; here's Uncle Joe's barn as big as life." "No," says unfeeling Liz, "that's the house; don't you see the porch?" "And that's Cousin Ed's auto, isn't it?" "No, stupid, that's a load of hay." "Is that Towser, or is it a pig?" "Search me," says Liz; "but sure that is the cow . . . no, it's a mule, I guess." Etc., etc., etc.

The supreme advantage of the tank is that it will produce some sort of a picture, if a picture is possible—with the smallest possible amount of intelligence, skill or artistic sense on the part of the operator.

The Printing-Box Up-to-Date

E. S. ANDERSON



THROUGH long acquaintance with PHOTO-ERA and its genial Editor, I feel quite safe in saying that it is an ever present aim of both to encourage the development of artistic as well as skilful technical handling of our photographic tools and materials. Thus it is not long before the systematic worker begins to realize that every negative represents an individual problem and demands individual treatment—from the standpoint of technique and rules of composition alike.

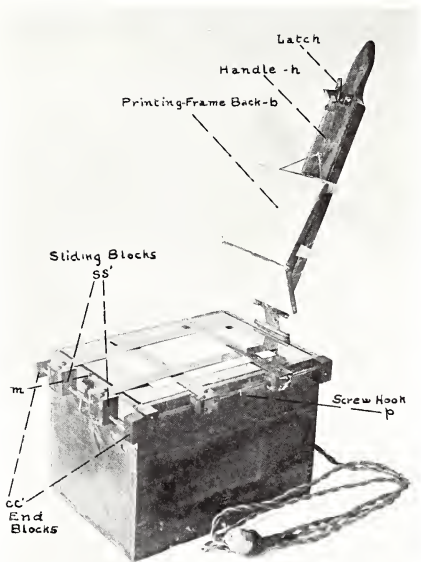
With gradual development of skill comes a corresponding habit of criticism of one's efforts, and study of ways and means of improvement. My own particular hobby for years has been to "take it small and enlarge," using the best part of the negative. But lately I have been doing quite a bit of contact-printing for friends, and the inability to make each print the size and shape which the particular subject seemed to demand, without the bother and tediousness of

cutting a special mask for each print, has been a literal thorn in the flesh.

Inspiration frequently comes to us in the wee small hours of the morning, which is perhaps the reason that when my eyes fell on the metal binding-strips on the asbestos packing of the steam-pipes in our basement—when coaxing a refractory fire, about 1 A.M.—I knew my problem was solved. Forty-eight hours later, the printing-box shown in the illustration was complete, permitting the masking of any negative up to 5 x 7 inches in any proportions desired.

Printing-boxes having been described so many times in these pages, the box itself will be described but briefly; but the masking-device will be explained in detail, as it makes artistic contact-printing so rapid and simple.

The box is a Walter Baker's sweet-chocolate packing-box—a most convenient size. Three porcelain electric-light sockets are mounted horizontally close to the bottom. Two contain 25-watt nitrogen lamps, centered beneath a



PRINTING-BOX

E. S. ANDERSON

5 x 7 opening shown at the top. The third contains a ruby bulb. All three lamps are connected with the outside circuit through a snap-switch on the back—which the illustration does not show. The white-lamp circuit is broken by an improvised switch made of two strips of spring-brass mounted horizontally one over the other, but not quite touching. When the handle *h* is pressed down, a metal plunger *m* forces the upper strip of brass down on the lower and completes the circuit, so that the printing-lights are burning only when the paper and negative are held firmly in contact by the printing-frame back *b* which is forced down by the handle *h*.

Around the inside of the box, at the top, there is a rabbet, just far enough down so that a sheet of clear glass resting on the rabbet will be flush with the top of the box. Gunned to the lower side of the glass is a sheet of black paper with a 5 x 7 opening centered in it.

The masking device is a rather "finicky" thing to apply to the box, so the exact method of

doing so will be given. First, obtain a curtain-rod at the nearest department-store, selecting one of the sliding variety, the inside rod being about 1/8-inch in diameter, and perfectly straight. Then interview the hardware-dealer: ask him to caliper the rod and sell you a straight-shank drill to make a hole through which the rod will pass very snugly—as close a fit as possible; this will cost about thirteen cents.

Cut four blocks of hard wood, $1 \times \frac{3}{4} \times \frac{3}{4}$ inches, and drill a hole through the center of each, using the straight-shank drill. Drill the holes with the drill as perpendicular to the $\frac{3}{4} \times \frac{3}{4}$ end as possible. Then line them up on the rod and plane or sandpaper them so that two adjacent edges are square and the thickness of the blocks from the inside of the holes to the surfaces of the blocks are exactly alike. This is important—and fussy when one's tools are as limited as mine.

Cut four extra blocks of the same size and sandpaper them smooth, as yet drilling no

holes. Then cut the curtain-rod into two sections, one 1/4-inch shorter than the long dimension of the box, and one 1/4-inch shorter than the upper edge of the end of the box. A pair of the drilled blocks *ss'* slides on each section, as shown in the illustration. In order that they may slide easily, the side of the box should be finely sandpapered. By drilling holes to within 1/8-inch of the ends of the last-made blocks and inserting the ends of the rods therein, fastening the blocks to the box at each end as shown *cc'*, the sliding blocks can be adjusted so that their upper surfaces slide flush with the upper edges of the box, without any free play if the blocks at the ends of the rods are leveled, and the holes drilled in them at the right distance from the outer surface of the box. An adjustment or two with the sandpaper-block may be needed to make this part of the adjustment smooth. A small right-angle screw hook *p* may be needed at the center of each rod to keep it from buckling outward in the middle, allowing too much free play in the sliding blocks.

Now for those blessed steam-pipe binding-strips! They are of very thin metal, with true edges, and do not rust. Half a dozen 12-inch binders can be bought from a steamfitter for a dime. See that they are perfect, with no kinks or marred edges. One of these is to be fastened firmly to each block, so that they criss-cross to make a rectangle adjustable to any shape or size within the limits of the box. No more mask-cutting for us.

Fastening these in place, so that opposite sides are parallel and adjacent sides perpendicular, is a simple task if done correctly. First, gum a sheet of white paper over the glass in the box. Then, using a carpenter's square or a T-square, draw lines across the short dimension of the paper, parallel to each other, one about one inch on each side of the center, as shown by the dotted lines in the diagram. Then, using a draughting-triangle, draw two lines perpendicular to those first drawn, about one inch each side of the center, respectively. Do not use the T-square on the end of the box to draw the *second set of lines*, as the end of the box may not be square with the side, which would mean that the second set of lines would not then be perpendicular to the first. The lines are to be used as guides for attaching the metal strips, so that it is of prime importance that they be carefully laid out.

Now place one strip along one of the lines, as shown in the diagram, and bring the printing-frame back and handle down so as to hold the strip firmly (on most printing-boxes a small cupboard-latch is attached beneath the handle

so that it may be depressed and remain locked as long as printing requires). Then slide the proper block beneath the protruding strip, bending the latter down and cutting it off at the lower edge of the block. Using 1/4-inch round-head screws, two on the top of the block and three on the outer side, the strip may be fastened so firmly that it will have no free play. In doing this, it is best to buy the screws by the box, and ask the hardware-clerk to caliper the shank just below the head; procure a straight-shank drill of the same size. When attaching the strips, first drill a hole for each screw. This assures a tight fit and no free play where the screw passes through the strip, and also lessens the chance of the several screws splitting the sliding block. This is a precautionary measure that it is well worth the time to make.

The position of the strips is really immaterial; but a certain order seems most practical. On the model, the front short strip is lowest; the two long strips are laid over it, and the rear short strip over them. Then, in operation, the negative is slid under the rear short strip and on top of the two long ones. The rear strip is held stationary, and the other three, being under the negative, may be adjusted easily. Then the paper is placed over the negative, the handle lowered until one section of the printing-frame back grips the paper and negative. The hand holding the paper is then withdrawn and the handle pressed down until the latch catches. At the same time, the circuit is completed and the printing-lamps are automatically lighted—until the handle is again raised.

On the long dimension of the maximum mask—seven inches—the variation of the mask on the model is never more than 1/64 inch, so that the automatic masking is as satisfactory as any results obtained by specially cut masks. And when the rapidity and ease of operation is considered—well, blessings be on the fire that refused to burn in the wee sma' hours of the morning.



Desirable Qualities in a Landscape

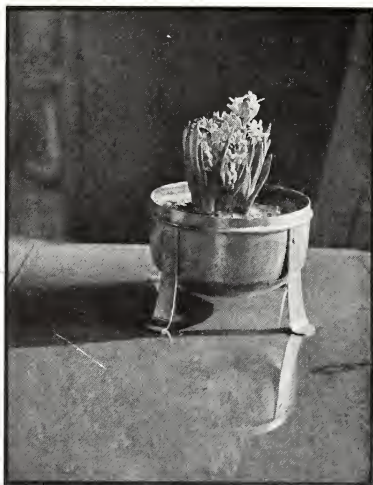
THE critics of landscape usually give to the scene represented such qualities as are suitable and attractive to walk in, suitable or pleasant to look at, suitable to ramble in, and suitable to live in. The *sansui* (landscape) that is supreme combines the four qualities. However, if it should be that only a part can be given, then that which is suitable to live in and to ramble in is preferable.

KUO HSI.



MOUNT PILATUS

WILFRED A. FRENCH



REFLECTIONS AND SHADOWS

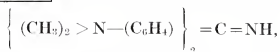
WILLIAM S. DAVIS

Auramine as a Sensitiser

O. BLOCH, F.I.C., and F. F. RENWICK, F.I.C.



URAMINE is a well-known yellow basic dye, used chiefly in coloring paper. It is the hydro-chloride of a base having the chemical formula



or a dimethyl-amido derivative of imino-diphenylmethane. Its use in photography has been practically restricted to the preparation of yellow filters, but even for this purpose it was abandoned on the introduction of the more stable Filter Yellow K and its successors. It has also been suggested for use in self-sensenced orthochromatic plates; but so far as we are aware, such plates have never appeared on the market.

About nine years ago, in the course of researches extending over many months on the production of color-sensitive plates by the bathing-process, we found that a little advantage

was usually to be gained by the employment of small quantities of auramine in the dye-bath. No use was made of the observation for several reasons, the chief being that it was found possible to produce still better results by employing a very dilute aqueous dye-bath (1:500,000) nearly saturated with pure quinoline (approximately 3:1,000) and giving the plates an immersion of several hours before rinsing and drying. We commend this method to any one interested in sensitising by the bathing-process. The dyes do not precipitate readily from this bath as they usually do from a plain aqueous solution, and the results are certainly superior.

During 1918, many hundreds of experiments were made in the course of a comparative study of a number of sensitising dyes, both old and new, which Sir William J. Pope and Dr. H. W. Mills were preparing at Cambridge. These experiments were not restricted to the bathing-method, but included also the second well-known

means of conferring color-sensitiveness, viz., addition of the dye-solution to the emulsion just prior to coating. At that time, it was urgently desired by the authorities (particularly by the R.N.A.S.) that a much faster and more color-sensitive plate than anything available should be prepared for aerial photography, and in endeavoring to meet this demand a very large number of combinations of the available dyes was tried. We were thus led to examine auramine afresh, both alone and in conjunction with other sensitizers. Used alone, it has no useful sensitising-action on silver gelatino-bromide plates. Critical examination of plates treated with it shows that there is only a slight displacement of the maximum of sensitiveness towards the blue green of the spectrum, unless sufficient is used to subdue the violet end by its screening-action. With gelatino-chloride plates, however, it proved to be a powerful sensitizer for the light blue of the spectrum, a region in which such plates are normally insensitive.

If this were all, there would be little to induce any one to trouble very much about auramine as a sensitizer. We found, however, that auramine, when added to a melted emulsion together with one or other of the "isocyanine" class of dyes, gave us some very interesting and valuable results which we were able eventually to turn to good account in producing the new Ilford Panchromatic Plates.

For the benefit of those who are unfamiliar with color-sensitising problems we may mention that, hitherto, all mixtures of sensitising-dyes have been found to give either simply an average

of the effects of the single dyes used or, much more commonly, a result which is distinctly inferior to this average. When, however, an isocyanine such as Sensitol Green (German name, "pinaverdol") or Sensitol Red (German name, "pinacyanol") is used with a small addition of auramine, altogether insufficient in amount to depress the blue sensitiveness by its screening-action, we found a marked enhancement of the sensitising-properties of the isocyanine in regions of the spectrum for which the auramine itself does not sensitise in the slightest degree. Moreover, it appears to be a general property of such combinations, for auramine exerts a similar stimulating action on quite a number of new isocyanines, with samples of which Sir William Pope and Dr. Mills have presented us.

In addition to giving improved color-sensitiveness, addition of auramine in very small quantity has the valuable merits of restraining the fogging-tendencies of the isocyanines and of materially prolonging the useful life of the plates. We may add that we have found no real loss of color-sensitiveness with age, though, as with all gelatine dryplates, the speed of development becomes slower as the film hardens.

Throughout this paper, and in the patents granted to us covering our invention (Eng. Patents Nos. 133,769 and 133,770, pending in America, and other countries), the term isocyanine is used in its original wide sense covering both the isocyanines proper, and the pinacyanols or quinoceanines derived from them. [A paper read before the Royal Photographic Society.]



THE LAST FURROW

C. A. BERRY



Figure 1. Flat Print from original negative



Figure 2. Print from negative copied from three glass-positives

Brilliant Contrasty Prints from Flat Negatives

E. B. WHITING

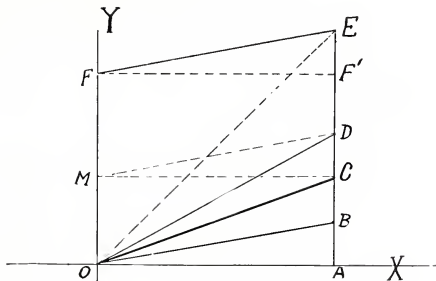


NATURE often arrives at equal results by different channels. Man, or at least that species of man known as the amateur-photographer, might occasionally find it to his advantage to emulate Nature in her methods and produce certain photographic results by means which in his opinion more suitably fit the occasion than do those of Mr. X. writing in the n'th number of the *Photo-Pressbutton Journal*, of Umbria, N.Y.

In the March, 1918, number of *PHOTO-ERA*, Mr. H. W. Gleason uses ammonium persulphate and an over-dense, contrasty negative to attain that joy of the true photographer's heart—a perfect print. The dearest friend of a short fat

superimpose in register, furnish the only limits to the degree of contrast obtainable.

In a double-holder of your copying-camera, place a sensitive plate in the usual way, film side out and in the other side of the holder (dark slide) place another plate with the film-side reversed or facing inward. Set up the negative properly lighted and expose both plates, without disturbing the focus. You get two positives on glass, one direct and the other reversed. When dry, these positives can be placed film to film and worked or worried into register. Clip together firmly (spring clothes-pins will answer) and copy the positives again in the camera onto a contrasty, slow plate. A print from this last nega-



man will inevitably be tall and thin. In the photographic world, we find over-dense negatives of well-nigh hopeless contrast balanced by a paradoxical modicum of lack-luster ones, whose exquisite detail, alas! prints like a whirlpool of liquid mud.

Study the accompanying diagram and you will discover the why and wherefore of one way to making a flat dull negative produce a sparkling, contrasty print that renders perfectly all those plainly visible and, in a thin negative, ravishingly delectable but apparently unprintable details. In fairy-stories, you are expected to suppose something; but according to the diagram all you have to do is to superimpose one transparent positive after another until you attain the desired amount of contrast. Your patience and the number of such positives you can

tive should be nearly twice as contrasty as the original negative. See opposite page.

If you want to use a film-positive between the two glass-positives, you will simplify the "registering" problem by having one plate and the film-positive made on a larger size than the third positive on glass. First you register the larger film and plate, and nip them together. Then register the smaller plate and clip it in position. An alternative method, where you intend to keep the positives permanently together, is to have them all on the same-sized plate, adding one plate or film after another, using a little liquid glue along the edge and allowing it to set between additions. A few clear glass-plates are essential, where film-positives are used. The more positives, the more trouble and the more contrasty the resultant print will be.

By actual experiment, the writer has found that three CONTACT positives on thin glass can be registered, if viewed at arm's length. Such unreversed transparencies, whose film-sides cannot be in absolute contact, must for geometrical reasons be copied with a long-focus lens and a camera of very long extension. The larger the superficial area of the positive, the longer will be the focus required to bring all parts in apparent register.

Referring to the diagram, if we print five positives—let us say one glass direct, one glass reversed and three on N. C. film—we get contrast from O to AE instead of the block of deposit O F F'A which would clog up a paper-print five times as darkly as a light, flat print O B.

The slope O D, or three positives superimposed, is about the optimum by this process for the average amateur where the work involved is balanced against the result obtained.

The process carried only to the glass-positive stage will certainly warrant the effort, for these "tandem" positives amply repay their creator, which is unfortunately more than can be said of some supposedly civilized humans. They, the

positives, certainly possess an unusual richness and brilliancy.

Then there is the possibility of making double lantern-slides from flat negatives; but that really deserves a little story all its own.



Poetic License That Misleads

UNDER the guise of poetic license many an anachronism has found its way into literature and become a fixed popular delusion. Witness the following brilliant flight of rhetoric by a well-known traveler and writer: "A sinuous lake, in whose cerulean waters an island-temple reflected, and whose stillness was broken by, a white replica of a gracefully moving swan."

It is bad enough for careless writers to refer to a copy of a painting or a statue as a replica, which it is not, unless made by the artist, himself; but to consider a mere reflection of an object as a replica is rhapsodic hyperbole.

W. A. F.

An Efficient Negative-Washer

WINN W. DAVIDSON

THE anecdote of the Swedish maid who "cleaned" the priceless negatives to the spotless transparency of cover-glasses, recalls an experience of my own.

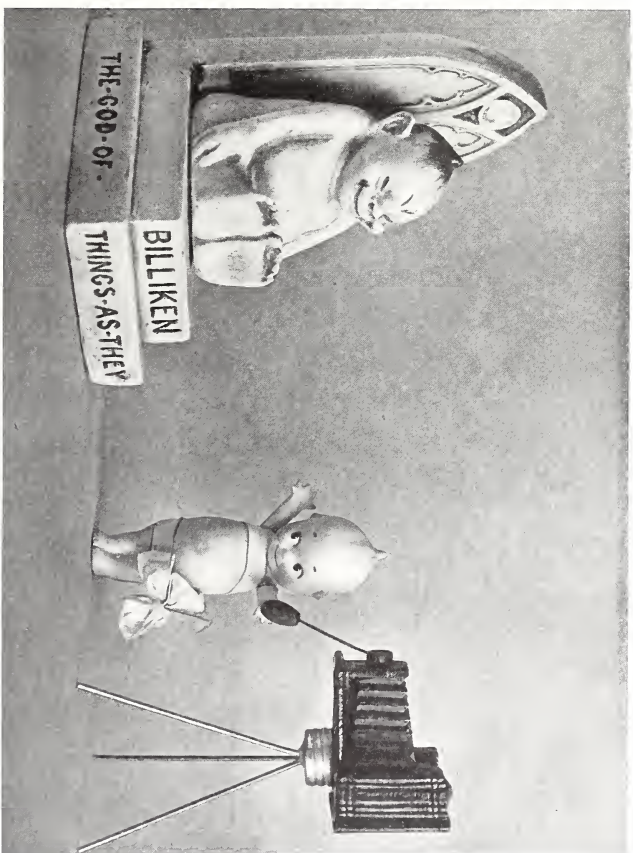
I had been very much pleased by the performance of an automatic negative-washer which consisted of half a dozen 8 x 10 zinc trays placed in a frame one above the other but slightly tilted in opposite directions so that the water entering the top tray flowed successively across all the lower trays. Wishing to save the expense of this new luxury, I determined to cobble up something at home that would serve the same purpose. Accordingly, I built a trough as long as the bath-tub would accommodate, and placing stops every five inches or so to hold the negatives in position, I hung the arrangement from the faucet in the bath-tub. The water ran into a small transverse trough at the head of the main trough so that it would overflow evenly upon the string of negatives below. Equipped with this rapid washing-device and a method for hardening the wet negatives in

formalin so that they could be dipped in hot water and dried instantly by their own heat, I undertook a rush-order for a dozen 5 x 7 negatives with a set of prints from each. The negatives all looked promising as they came out of the hypo, but I had no time to study them closely as I placed them in the trough for washing: I made a mental note that I would paint the trough white, instead of black, so that I could study the negatives while they washed.

I remember taking great pains to see that the film-side was up in every case: then I turned on the water and watched to see the hypo disappear or for anything else of interest that might happen.

Something interesting did happen.

As nearly as I could observe against the dark background of the trough, the sharp decisive angles of architecture had given place to soft artistic sigmoid curves—or had I altered the positions of the negatives without noticing the fact? But examination showed the negatives were all sinuous in their composition; so sinuous, indeed, as to convey an illusion of motion. The illusion was so perfect, that for a moment I



"HOLD IT!"

HARRY C. BREIDAN

thought they did move. That was impossible of course: *e pur si muove!*

The awful truth dawned upon me, and I turned off the water and grabbed up a negative. That was, it had been a negative. There had been twelve 5 x 7 negatives; now there was none. I had turned on the hot water! My intention had been to give the formalin bath after the plates had been washed, but I was spared that trouble and cannot say whether the bath would have saved the plates had it been given as preventive treatment in the circumstances.

Since then, I have taken to the use of acid hypo; and while hot water might injure the negatives I make now, it could not possibly clean one as perfectly as it did that "rush-order" dozen—not even if I wanted one for a cover-glass or for a printing-frame.

It might be noted that there is absolutely nothing the matter with the washer that I have described, and it will give excellent results if cold water is substituted for hot water "in the above formula." A very slight inclination of the trough is all that is necessary.

Vacation-Prints

G. T. BROWNE



SUPPOSE that most of us mean to do something with our collections of vacation-snapshots, when that glad season is past. But what? That is the difficulty. These pictures drift usually into a box for safe keeping, or get tucked away in envelopes and sometimes get lost permanently. We look and look for just that one picture which we want to show to a friend. Of course, it is nowhere to be found, and it was the best one of the bunch too. Have you ever had this happen?

A fearless snapshooter thought deeply on the problem, fingered critically the albums which are offered for just such collections, remembered the unsatisfying results, ill-proportioned size, dreary-colored leaves and gaping, blank pages at the back of photograph-albums handed to him for admiration by his enthusiastic friends. It is a notable fact that people herd along in any old direction so long as every one is doing it. A part of the fearlessness of this camerist was his bold decision to be original and have something that just fitted his kind and size of pictures—something planned on the very old-fashioned "His Book." style. It was to be made of just the right shade of light-weight cardboard, wood-brown in color, to have just the correct flexibility to the pages and no empty, expectant leaves at the back. No, sir; every one would

have its single print, or its group, according to the artistic lights of the designer, and the book would be complete at any stage, whether there were six leaves or a hundred.

This particular book, when finished, was 6 x 8 inches, as it gave a satisfactory mounting for a single print or room for several. Each leaf was cut, however, 8 1-2 inches long, the last half-inch being doubled over half an inch to form a stay along the back, where holes were punched through the two thicknesses thus formed, for the tie cords or loose leaf rings to pass through, for binding. The back-cover was left unornamented, but the front-cover was finished with fancy lettering forming the legend, "Vacation of 1919," and the owner's initials were woven into a monogram. This book is doubly prized because it not only gives lasting pleasure, but shows how others are now possible in which may be classified prints of any particular locality, subject or season.

Some people will say, "That is too much trouble." But if you are one who is not afraid to try something which is really worth while, you will be surprised to find how much additional pleasure, other than making the pictures, has been derived from building your own book.

Finally, according to your enthusiasm, the perspective into the future promises a whole library, if you choose, of such cherished records.



Epilogue

POEM SUGGESTED BY MR. WESTON'S PICTURE

Y. BILLY RUBIN



A dim gray ground
For a bold black figure;
A soft vague light
To lessen the rigor.

The stems rising up
With their blossoms like mist;
Aware of a future
Whose present they've kissed.

The vase's soft tale
Of dreams that have been;
Dreams all unknown
But to those who've looked in.

A line sloping down
To a far greater mystery;
Adding and making
Of the whole — quite a history.



Edward Weston

Then a figure so svelt,
A face so enticing;
With its languorous look,
Half repelling, half inviting.

An arresting hand up,
A fan poised perfectly;
With its arch and its line
As if held for eternity.

A tale of what passed,
And a hint of that to be
Are gracefully shown
In this picture-fantasy.



Copyright International Film Service

VINCENT RICHARDS

CHARLES M. CLARK

Why Deposits Occur in Photographic Solutions



ALTHOUGH every photographer who makes up his own solutions must know necessarily that in some cases the chemicals dissolve to a water-white mixture and in others the preparation is turbid or muddy, many no doubt who have not thought it worth while to devote a little study to the properties of chemical substances are somewhat in the dark as to when or why chemicals behave differently in this respect, and when or why any harmful result in the use of the photographic solutions may follow. The subject, therefore, may deserve a few notes by way of information and explanation to those who would sooner use their own intelligence than blindly follow printed or verbal directions.

So far as concerns most of the chemicals which are used in making up developing, fixing and other solutions in common photographic use according to the customary formulæ, it may be said that such solutions, if made with perfectly pure water, will show scarcely a trace of turbidity or milkiness, much less any considerable quantity of deposit. But for most purposes it is not customary or necessary to use water of the purity obtained by distilling: ordinary tap-water, although it is inferior to distilled water, particularly for certain chemicals, is good enough on the whole for mixing developers, fixing-baths, etc., for ordinary use. However, the small quantities of impurities which it does contain are one cause of the chemicals of these baths not dis-



"REVERY"

RALPH D. HARTMAN

solving to perfectly clear and bright solutions. From this point of view the impurities in tap-water are of two chief kinds: (1) mineral salts of lime and magnesia existing dissolved in the water in the form of carbonates or sulphate and partly deposited from the water by boiling, and (2) ordinary common salt consisting of sodium chloride. The first class of these impurities are those which make the water "hard," a property of ordinary town-water which varies very greatly in different localities.

Of the lime and magnesia-salts, those existing in the water in the form of sulphates remain dissolved even though the water be boiled, and those existing as carbonates, by virtue of carbonic-acid gas contained in the water, are deposited by boiling, forming the scale or "fur" familiar in kettles and of soft powdery nature if the water contains only carbonates, but hard and almost stone-like if the water contains also sulphate of lime. Thus it will be understood that in the case of a water containing, as most do, dissolved lime carbonates, the mere operation of boiling or heating to a temperature somewhat short of boiling throws down a certain proportion of these carbonates owing to the expul-

sion of the carbonic-acid gas. This is one cause of lack of clearness in the solution, but the fact is also a reminder that ordinary tap-water can be considerably improved for solution-making purposes by first bringing it to the boil, allowing it to boil briskly for a minute or two, then standing it aside to cool gradually. By this means the carbonates of lime are almost completely deposited: they settle after a little while and the clear water can be poured off from them. Actually there is little gain from this process so far as the removal of the lime-carbonates is concerned: the chief advantage of the process is that the dissolved air is boiled out of the water, so that the solution of a developing-agent such as pyro, which readily oxidizes, is given a better chance at the start of forming a colorless solution and of retaining its properties unimpaired.

In making up solutions, however, lime-salts dissolved in the water in any form may cause a considerable amount of deposit. This is so, for example, in making up solutions of oxalate of potash—for the platinotype developer—since the oxalate forms an insoluble oxalate of lime which produces a very milky mixture. In this case the deposit can be given a day or so to settle and the

solution poured off from it, although no great harm will result if it is used in the milky state produced when it is freshly mixed. Ammonia and any salt of mercury or lead are also compounds which form a greater or less degree of milkiness when dissolved in ordinary hard water.

Chlorides (salt) in a water are usually present in very small measure, but that is quite enough inevitably to produce a milkiness in any solution into which silver-nitrate enters as a constituent. The silver-nitrate forms insoluble silver-chloride with the salt. This is a case in which it is just as well to use distilled water in order to obtain a bright solution, for example in making up the intensifier for the Autochrome plate according to the original instructions. On the other hand, the stock-solutions for some other silver-intensifiers, such as the Wellington, which are used in conjunction with hypo, may just as well be made up with ordinary tap-water, for any opalescence due to chlorides will be cleared up on addition of the hypo.

The above considerations are the chief of those which relate to the effect of tap-water in making up the photographer's customary baths, but they do not take account of impurities in the chemicals themselves. Occasionally, but not by any means invariably, impurity of a chemical is indicated by its forming a milky or turbid solution. This is the case, for example, with sodium-carbonate, a good, pure crystallised sample of which will dissolve even in ordinary water to almost a bright solution, whereas the cruder washing-soda will almost always give a turbid solution owing to the precipitation of alumina and other impurities contained in it. Hypo may be another case in point, for a bad sample will often reveal its inferior quality by forming a slightly milky solution, although we think it is not perfectly safe to condemn a sample of hypo on this ground nor to assume that the substance is *Al* because it dissolves to a bright solution.

We may conclude these notes by reminding the photographic experimenter who has not had any chemical training that all kinds of deposits

and precipitates are to be expected in dissolving various chemicals in the same solution. Broadly, it may be said that addition of any soluble carbonate—sodium, potassium, or ammonium-carbonate—will bring down a precipitate if dissolved in the same solution as a salt of almost any other metal, but particularly the heavier metals—lead, mercury, iron, copper, bismuth, aluminium and chromium. Caustic alkalies also such as ammonia, caustic potash and caustic soda behave very similarly in this respect to the carbonated alkalies, and there are very few metallic salts which are not precipitated by a solution of sodium-sulphide. In all these cases, a double decomposition takes place: the heavier metal is thrown down as a carbonate, hydroxide or sulphide, and the acid radicle with which it was combined unites with the alkali of the carbonate, hydroxide or sulphide. Other soluble compounds are less general in their precipitating-action. For example, the solution of a sulphate produces a deposit as a rule only with compounds of lead and barium. There was an instance of the latter mentioned not long ago by a correspondent, who avoids certain drawbacks of barium-sulphide in sepia-toning by adding sodium-sulphate to the solution, with the result that barium-sulphate is thrown down and sodium-sulphide left in solution—when all is said and done, simply a roundabout way of making a weak solution of sodium-sulphide. Ferrocyanides are another class of salt which form precipitates with many salts of the heavy metals, but the deposits may be kept in solution by adding certain other compounds which apparently remain unaltered but serve to prevent the formation of a precipitate. Citrate of potash is the best example of a substance of this kind, and is used for this purpose in the copper-toner of Mr. W. B. Ferguson. It is a substance which may be commended to the photographic experimenter as perhaps the best preventive there is of many precipitates, and also one which in many cases will exert no other action than this solvent one.

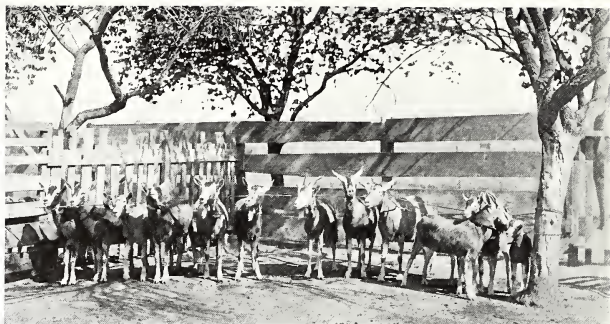
The British Journal.





THE FIRE-FIGHTERS

CHARLES J. HERNATIER



THE PSYCHOLOGICAL MOMENT

EDWARD B. ELLIAS

A Photographer and a Goat-Ranch

LILLIAN E. DAVIS

THERE was a shipment of very rare goats going out that morning and everybody at the Ranch was in a flurry of excitement. The Photographer had been urgently requested to come "early," even as early as seven o'clock! The Photographer was a very busy man but had promised to be on hand at eight, with his camera, provided that all the carefully nursery-raised goat-pets would be posed at that moment for his delicate operations. He had promised himself to be back at his studio at nine.

Eight o'clock arrived and with it, the Photographer. But, where was the carefully arranged line of expectant faces upon which he must focus his camera? Oh, they would soon be ready; so, studiously placing the costly instrument out of range of eager horns and restless hind-feet, to say nothing of ever-ready teeth, the Photographer waited.

It was annoying to be kept waiting, but perhaps he should be more appreciative of the musical reception with which he was being honored. "Ba-a-a" sounded from one corner of the ranch to the other, from pen to pen and shed to shed, in cracked, metallic rasps, until it seemed the very air breathed forth incessantly crackling noises. Small boys scurried here and

there as the maternal raiser of goats directed the assembling of Venus, Aurora, Minerva, Helen, Cleopatra, and many others, for the photographic registering of the "dear faces" before their departure.

Just as the Photographer felt himself ready to scream, pull his hair and run to the nethermost parts of the earth with his fingers in his ears, his attention was rudely forced from this operative treat by the announcement that he might bring his camera into pen number one.

Ah,—now the touch of his beloved instrument brought him to familiar ground once more, and the concentration of all his faculties was needed to safely arrange the camera and focus it upon the restless creatures being tied at intervals along the rope from tree to fence. Mingled with the Ba-a-a of the rare and pedigreed creatures, sounded the cooing of their mistress, soothingly persuading their horned heads from locking and their hind feet from disturbing the orderly line of posed glory.

"Now, Beauty, move over next to Lover," and "Don't be frightened, Sweetie," and so on, could be heard at intervals as the master and boys tried to carry out her directions, together with an occasional "Oh, aren't they just too sweet for words!" And, the little creatures,

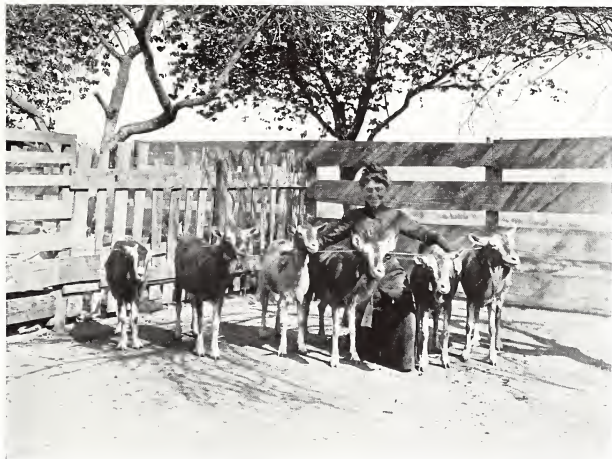
with widely wondering eyes and soft, silky hair almost seemed to justify the affection lavished upon them.

Soon, the line was ready and the Photographer was able to secure one small boy to keep the less favored goats from chewing his plate-ease, and another to see that none ran into his camera, while he placed and exposed the plates. Now, for the first exposure!

A strange fact, though one to be noted here,

snapped his shutter at just the psychological instant and registered only expressions of rapt attention and entranced interest on the part of the goats. In a second, it was over, and the nerves of the Photographer were again soothed by the familiar Ba-a-a-s of the gentle creatures.

This operation was repeated many times, until the goats were taken in all the poses so well loved by their adoring mistress, and the Photographer felt himself a hero and a saint.



THE GOATS AND THEIR MISTRESS

EDWARD B. ELLIAS

is that these rare creatures are peculiarly susceptible to loud, harsh noises—that is, if such noises are of sufficient volume to drown out their own chorus of rapturous melody. So, when the Photographer and the line of goats were both ready, in order to attract the attention of the goats toward the camera, their many attendants, together with the master and mistress, simultaneously raised themselves in the air from the ground about the line of goats and landed around and behind the Photographer, with mighty thunderings upon tin pans and vociferous outcries and yellings. So tremendous was the call to the wild, that the startled Photographer, fancying himself attacked by the German Army or the Japanese Navy, and his camera a machine-gun,

One may fondly imagine that the apparently quiet life of photographic art is peaceful and serene; but let him be assured that it is by no means monotonous.



REALISM in art has a twofold meaning. Truth to nature may allow a painter to portray a broom-handle with consummate skill. But a too close fidelity to usual fact often retards that broader and more spiritual interpretation of nature and blinds the vision to those rhythms born when the sea was made to live and when the great mountain-peaks were reared by mighty forces.—GEORGE ALFRED WILLIAMS.

A Simple Experiment in Night-Photography

A. H. BEARDSLEY



PHOTOGRAPHERS know that the colors in a beam of sunlight which affect the film or plate the most are principally the ultra-violet and the blue. The green, yellow and red beams—unless aided by a light-filter—are least active in forming the image on the film or plate, despite the fact that they may affect the human eye to a greater extent than the ultra-violet and the blue. What the eye carries to the brain is termed, the visual focus; and what the lens conveys to the film or plate is known as the chemical focus. In the days before color-corrected lenses, the difference between the visual and the chemical focus had to be compensated for by moving the lens forward about one-eighth or one-quarter of an inch *after* the picture had been visually focused on the ground-glass. Now, if the ultra-violet and the blue beams of sunlight affect the film or plate more than other colors of the spectrum, is the same thing true when the source of light is electricity or gas?

In considering this interesting point, I am doing so as the average amateur photographer would try to understand it and not as a physicist or optician. Moreover, I am assuming that the average camerist knows little about light and that he has no scientific apparatus with which to experiment. In short, he has an ordinary roll-film camera and with it he makes a few experiments to satisfy his curiosity. If he happens to have a prism, diamond-ring or scarf-pin he can readily break any beam of natural or artificial light into colors. By this means he may prove to his satisfaction that the beams from an electric- or gas-lamp are just as much filled with color as beams of sunlight.

Let us go a step farther. If we should take one plain electric lamp and dip it into a solution which would stain it a color approximating that of the ultra-violet and blue and then take another lamp and dip it into a green solution and so on until we had all the visible colors of the spectrum approximated in a row of electric lamps, what would be the effect of these color-values on the film or plate? As already stated, I am assuming that the amateur photographer has no apparatus or any means to work out the problem scientifically. In the circumstances, his only recourse is to utilize an electric advertising sign that contains most of the colors of the visible spectrum. In no place in the world may a better

assortment be found than at Times Square, New York City.

My experiments were all made the same evening from an office-window on the fourth floor of the Times Building. As far as possible, I endeavored to place myself in the position of the average amateur photographer. I tried to think as he would think and to act as he would act with the simple camera-equipment at his command. My outfit consisted of an ordinary, little $2\frac{1}{4} \times 3\frac{1}{4}$ roll film camera equipped with a moderate-priced anastigmat—color-corrected—lens and a standard orthochromatic film. From the negatives obtained, I made 5×7 enlargements in order to bring out all possible detail. I had no tripod, light-filter, lens-shade or other accessory. Conditions over which I had no control prevented my making these pictures facing up Broadway. However, there was ample material available on 42nd Street and Seventh Avenue.

Now let us consider each experiment in order. The first was made by *daylight* and was an ordinary snapshot of the electric sign and lobby of the Rialto Theater in New York City, with no claim of interest except by way of contrast to the second experiment. Incidentally, not one of my pictures would be considered as a good example of night-photography. All were merely pictorial records of an experiment made with the simplest equipment available. As such, they serve their purpose. The second experiment made *at night*, consisted of placing the camera on the window-sill—window open—and giving a ten-minute time-exposure at lens-stop F/8. The electric lamps in the crossed American flags of the Rialto electric sign were white on a painted background of red, white and blue. The long "skyrocket" part of the sign was composed of purplish, blue lamps. The border around the word RIALTO was made up of white lamps on an orange-yellow painted background and the letters were white. My third experiment was a view of 42nd Street looking toward Eighth Avenue from Seventh Avenue. This picture was made by a fifteen-minute exposure through a very dirty window-pane at lens-stop F/8. Virtually every color of the visible spectrum was included in the electric signs photographed. In addition, there were some highly colored billboards illuminated by powerful lights. Although the absence of crowds and traffic might lead the layman who looked at the



"LITTLE BRIGHT EYES"

BRADLEY STUDIO

picture to assume that it was made when the street was deserted, let me assure the reader that it was about 8 P.M. and that the street *was* crowded and that there *was* traffic. The general dark color-tone of the crowds and the fact that they were in rapid motion accounts for the failure of the film to record their presence. With the exception of one taxi-cab, the traffic moved too rapidly to be impressed on the sensitive emulsion of the film. My fourth experiment was a view of 42nd Street and Seventh Avenue and was interesting because it included both direct and indirect electric illumination. The exposure was ten minutes with the window open at lens-stop F/8. Virtually the entire Selznick sign at the corner of 42nd Street and Seventh Avenue was composed of white lamps. The bill-boards were highly colored and the picture brought out the orthochromatic values to advantage. If the

reader will bear in mind the very simple character of the camera-outfit and the lack of any studied preparation, I think that he will consider my reference to these simple experiments as of sufficient value to aid us to reach some sort of a conclusion with regard to the point under discussion.

In summing up the result of these four exposures as described, it would seem that a "dipped" electric lamp—of whatever color—has less actinic value than one that is clear glass. No doubt, some physicist could have furnished the information; but let us assume that our average amateur photographer does not and did not know a physicist. In one sense, the camerist is better off; for he will enjoy his photography the more by making experiments of his own—no matter how crude they may be. To return to our "dipped" electric lamp. Because it is



THE HOUSE ON THE CLIFF
MELODY FALLS
WILLIAM LUDLUM

blue and this color in daylight affects the film to a greater extent than other colors, the fact remains that at night a blue electric lamp has comparatively little actinic value. In short, by dipping a lamp in a blue solution we merely cut down the actinic power of the light. We do not increase its effect upon the film. Hence, in

night-photography the colors of objects are apparently of less importance than by daylight. Of course, the physicist and optician can explain these facts by x, y, z—but will the average amateur photographer know more than he does now or enjoy the scientific explanation as much as he would this experiment?

“Taking” Things as You Find Them

WILLIAM LUDLUM

HE ability to “take things as you find them,” regardless of your personal likes or dislikes, and to find satisfaction therein, is the true philosophy of happiness and right living; but this, apparently, does not apply to the realms of photography as emphasized by numerous critics. Most print criticisms suggest that *if* the camera had been held a little bit more to the right or to the left, as the case may be, or a little bit higher or lower, or nearer to, or further away from, the subject—the picture would have been much more satisfactory.

There are, of course, adaptable conditions, when and where it is possible to shift the tripod or foothold; but, more often than not, there is just one spot, and one only, where the camera may be set to obtain a particular and much-desired view, and where a slight deviation of position means either a broken leg or a wrecked outfit. After one has risked life and limb, and the cost of expensive apparatus, going to no end of trouble and discomfort to photograph a choice bit of landscape,—choice from the association of happy holidays,—it is not very encouraging to read some critic’s assertion that, “a real picture might have resulted, *if*—curses on all ‘ifs’—if the camera had been placed a few feet further to the left.”

Mr. Critic does not know of the precipice yawning within the limits of his “few feet to the left,” only waiting for a single misstep to put a sudden termination to a promising photo-

graphic career; but he just slams away and unthinkingly hurls his verbal bomb into the enemy’s camp and, bang! up goes the print and down goes the poor artist’s heart to the bottom of his shoes. Sometimes it is only a tree-trunk, or a dense cluster of foliage forbidding the change of position desired by Mr. Critic; but the difficulty is just as insurmountable as the precipice and cannot be overcome by any means at the disposal of the camerist. He does the best he can with the only available viewpoint and, if the result pleases him, he should let it go at that and not allow Mr. Critic’s shaft to strike too deep. The excuse for criticism of viewpoint lies in the fact that the critic must “take things (or prints) as *he* finds them,” too, and cannot see beyond the limits of the paper any more than the photographer can move beyond the limits of his “fixed,” by nature, point of attack. If the manipulation of negative and print and photographic technique are as nearly perfect as possible, much may be overlooked. In other words, please Mr. Critic by following the simpler rules of proportion in pictorial composition whenever the opportunity offers; but—when nature says, “Thus far shalt thou go; beyond lies danger!”—take your stand right there and blaze away.

The prints that accompany this had each but one possible viewpoint. If they reveal any particular merit in composition it is due to the fact that Dame Nature was more kindly disposed than usual in providing “shooting” privileges for the pictorial photographer.





THE OLD SPRING-HOUSE
JOHN W. NEWTON





EDITORIAL



A Lost Art?

HAVE you noticed that in the average portrait-photograph—excepting in the moustache-covered mouth—the lower lip, protruding and strongly lighted, is excessively prominent? Persons who care little how they sit, how they stand or how they walk, appear little concerned how their mouths look when closed, as they sit for their photograph. There seems to be a tendency to allow the lower lip to protrude, which, particularly in a profile, gives the face an expression that is neither wholly natural nor felicitous. The old masters in photographic portraiture observed this, and, just before exposing the plate, requested the sitter to moisten the lips, close them gently and, at the same time, slightly draw in the lower lip. The result was that, in the photograph, the mouth appeared natural and pleasing, which greatly improved the facial expression. The skilful and painstaking photographer of today does not neglect to give his sitters the benefit of this valuable hint, and, by producing correct and pleasing portraits, acquires a distinct advantage over his untrained competitor.

Much of the portrait-work done by amateurs, too, shows lack of experience in the ways that make for skilful craftsmanship. The reason is obvious. Those who are ambitious to excel in portraiture—by far the most difficult task in photographic practice—should study the portraits of such old masters as Rocher, Sarony, Bradley, Gutekunst, Landy, Allen & Rowell, and Ryder. Each, though somewhat conventional as regards lighting, posing and in the use of accessories, excelled in solidity of construction, conscientious attention to anatomical truth, careful observation of the sitter's features and characteristics, and artistic modeling.

In following the line of study, as suggested, the photographer must be sure to select exemplary models, for there were numerous portrait-photographers who, in their time, were popular, productive and enjoyed an excellent business-reputation; but were not sufficiently skilled or artistic to deserve to be ranked as master-photographers. It is very much like the art- or music-student, who conscientiously and industriously practices the wrong method, thereby wasting his time, money and energy.

Photo-Finishing in a City-Apartment

TURNING the bathroom of an apartment into an improvised photo-laboratory calls into play considerable ingenuity and resourcefulness. The practice, however, may be attended by disastrous consequences, if proper caution and vigilance are not exercised. That family-feuds often result from the disorderly and dirty condition in which the worker leaves the bathroom, is not to be wondered at. Indeed, it would not be strange if some housewives were to regard the matter as a reason for divorce! As for the landlord, he would be justified if, in case of serious damage to his property, he ordered the unlucky tenant to vacate the premises. In these days of great scarcity of abodes and exorbitant rents, that would be another calamity.

However adequate the devices for washing negatives or prints, it is imperative that the outlet of the waste-water be not impeded. Every precaution should be taken to prevent an overflow. I have known cases where a stray print lodged over the drain-pipe, during the absence of the worker, and caused the bath-tub or the wash-bowl to overflow—submerging the floor and, penetrating it, ruining the ceiling and walls of the room below. It cost the careless amateur photographer nearly one hundred dollars to pay for the damage. Some chemical stains in the bowl or in the tub, or on the edges, are very difficult if not impossible to remove. The drying of dripping prints over the tub is also likely to cause discoloration.

These and other troubles may be avoided by adopting preventive measures, one of which is to protect the floor and other exposed places with rubber-cloth. A large sponge should be kept handy to remove quickly any drippings that may have fallen. If desired to install home-made conveniences, the amateur-worker may profit by reading A. J. Voorhees' article, "An Apartment-Dweller's Hobby," printed in our last issue.



THE genuine camera-enthusiast need not be reminded that the winter-months offer numerous opportunities for grateful indoor-activity. There is the charm of still-life photography; at-home portraiture, making lantern-slides and enlarged prints; arranging the season's work in albums, and coloring photographs.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.**

Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. **Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Shore-Scenes Competition Closed August 31, 1920

First Prize: Ernest M. Pratt.

Second Prize: Charles A. Brockway.

Third Prize: Maude Lee Eldridge.

Honorable Mention: Clifton Adams; A. C. Akerman; D. R. Battles; Lewis Benthall; John C. Bird; Robert T. Chadbourne; T. W. Craddock; A. W. Cutting; H. P. Dahlen; George M. Gerhard; Lillian A. Guernsey; George A. Flansburg; Herbert J. Harper; J. B. Herrick; Susai Itow; Mrs. Gordon J. Jollimaie; F. W. Kent; H. E. Lovick; E. S. McKay; Stephen Marsh; Arthur C. Miller; George S. Nalle; Ozan K. Nunome; Charles H. Partington; O. F. Poarch; John F. Roberts; F. H. Rodgers; Nicholas A. Romano; Edwards H. Smith; G. A. Smith; Albert A. Sterritt; Joseph H. Stoffel; R. B. M. Taylor; Sam Weitz; Leopold Zwarg.

Subjects for Competition—1920

- "Outdoor-Genres." Closes September 30.
- "Architectural Subjects." Closes October 31.
- "Domestic Pets." Closes November 30.
- "Indoor-Genres." Closes December 31.

1921

- "Winter-Sports." Closes January 31.
- "Home-Portraits." Closes February 28.
- "Copying Works of Art." Closes March 31.
(Paintings and Statuary.)
- "Home-Scenes" (Interior). Closes April 30.
- "Street-Scenes." Closes May 31.
- "Summer-Sports." Closes June 30.
- "Summer-Flowers." Closes July 31.
- "Shore-Scenes." Closes August 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print.



THE BOATMAN

FIRST PRIZE—SHORE-SCENES

E. M. PRATT

Stain-Removers

Of nothing is the saying "prevention is better than cure" more true than of stains on negatives or prints; since the film of gelatine or other vehicle seems to have a great affinity for stains, and the image itself which it contains is very apt to be attacked by anything which may be used to remove them. In fact, a writer in an English cotemporary remarks, it is no exaggeration to say that in most cases it is much easier to remove a photographic image entirely and to leave the stain unaffected, than it is to do the opposite. The moral is obvious.

Various clearing-baths have been advocated, the most usual being a strong alum-solution to which citric acid is added. The proportions generally recommended are an ounce of alum and a quarter of an ounce of citric acid to the pint of water. Mild cases of stain from oxidized developer yield to this if applied for a few minutes; but if the stain is deep, this clearing bath will not touch it.

Another clearing-solution which will often be found effective is one containing sulphurous acid. This can be made by dissolving a little potassium metabisulphite in water, or by adding a trace of sulphuric hydrochloric, or almost any acid to a solution of sodium sulphite. The strength in either case is of no great importance, as long as it is not great enough to injure the gelatine. If on sniffing at the surface of the solution, there is a distinct smell like that of burning sulphur, the necessary sulphurous acid is present.

Of course, when the stains are due to some known substance, they are amenable to solutions which will attack or dissolve that substance. Thus a two per cent solution of oxalic acid will remove stains due to

writing-ink or to potassium permanganate; sulphite-solution will remove stains caused by iodine; petrol or ether marks due to grease.

Stains which are practically irremovable are those which are caused by impurities preventing the solutions from acting properly. The slightest touch with a greasy finger, for instance, on the surface of sensitive paper, will leave a repellent patch which the various solutions cannot reach at the same time as the rest. The consequence is that these parts are quite different from the rest, possibly white but sometimes brownish. Nothing that removes grease can affect them, because they are not grease, but merely the result of its presence. Traces of hypo from the fingers often have a similar effect. In the strictest sense these are not stains. The impossibility of their removal should show how important it is to avoid them.

The bleaching-action of chlorine is sometimes used to remove stains from negatives, a weak solution of bleaching-powder being used. If this removes the stain before attacking the image, a mere washing completes the operation. If both stain and image bleach, there is still a possibility that, when the action has gone far enough, the negative may be washed and the image redeveloped without the stain appearing again, by the application of some non-staining developer, such as amidol. But it does not always happen so.

Whatever may have been used to remove the stain, the final operation must be a thorough washing; or, if the stain shows signs of coming back in the washing-water, the washing must be carried as far as seems possible. The great importance of thorough washing of plates and films cannot be overestimated. But far better is it to work with such care that the trouble referred to does not arise.



THE BOY GROWN TALL

CHARLES A. BROCKAWAY

SECOND PRIZE — SHORE-SCENES

Focusing Interiors

THERE are few processes in photography which demand more skill than focusing an interior when the light is so poor that it is almost, if not quite, impossible to make sure that the image on the screen is sharp at every important point. Some people cut the Gordian knot by performing the focusing in a rough sort of way, and then inserting a stop so small that they assume that it must make everything quite sharp. There are only two objections to this practice; one is that it may lead to underexposure, or, at any rate, to such lengthy exposures as to interfere very largely with the progress of the work, and the other is that, with some lenses, the introduction of a small stop may actually throw parts of the image out of focus by altering the length of focus of the lens. Such a plan should not be adopted, then, unless everything else fails. There is one feature which makes many interior subjects easier to focus than they would be otherwise, and this is that in a great many cases the most distant object is a highlight, usually a window, so that it is quite easy to see if it is sharp or not. In such a case,

the best thing to do is to focus that window as sharply as possible, and then to put a lighted candle or match at the nearest object, and, inserting the largest stop that is likely to be serviceable, gradually to increase the distance between the groundglass and the lens, watching the window all the time, and stopping as soon as its departure from absolute sharpness is noticeable. If the flame of the candle is then seen to be sharp, well and good; if not, a small stop must be put in and the process repeated. If a window or other highlight is not the most distant object, it is often possible to turn the camera a little until a window at about the same distance can be seen on the screen, and this may then be focused as before, turning the camera back to its original position, without altering the focus, of course, to take the picture. Two points should never be forgotten. One is that a little want of sharpness may be overlooked in the distant parts when it would be quite offensive were it in the foreground. That, at all events, must not be perceptibly fuzzy. The other is not to overlook the dark corners of the focusing-screen, where, from the angle at which it is seen and the falling off in the illumination, there

THIRD PRIZE
SHORE-SCENES



A YOUNG NAVIGATOR

MAUDE LEE ELDRIDGE

is a risk that lack of sharpness may be overlooked when focusing, which in the finished print would altogether spoil it.—*Harrington Photo-Journal*.

[The writer of this focusing-hint has omitted to explain how to proceed when a window is either not available or difficult to utilize. In such a case, a lighted candle or lamp, or an electric light, will aid greatly in obtaining a sharp focus. With none of these conveniences available, a pocket-flashlamp—if at hand—can be used successfully; even a lighted match—or several of them—will serve the purpose admirably.—EDITOR.]

Sagging Bellows

A MATTER which should receive attention from time to time, says a writer in *The Amateur Photographer*, is whether the bellows of a camera have become stretched and weakened to such an extent as to cause them to sag, and so to cut off some of the image. This is particularly necessary in the case of bellows-patterns used as hand-cameras. When the outfit has a ground-glass in frequent use, there is not much likelihood of this taking place without it being discovered pretty quickly; but, of course, the fact that the bellows are cutting off any of the image does not reveal itself in

the finder, and on a holiday one might go on exposing plate after plate, and never find out, until getting home and developing, that a broad strip along one edge of each negative is represented by nothing more than clear glass. There is one thing about it, and that is when the worker has once been put on his guard he should not be caught in this way; as any tendency on the part of the bellows to hang down can be seen at a glance from the outside of the camera. For the time being, something can generally be slipped under the bellows to prop them up—a pencil or a match-box, or some other makeshift that will do what is needed; but at the first opportunity they should be restiffened. This can be done by stretching them out and brushing stiff hot glue over the inside, reblacking the surface when the glue is dry; or the camera may be sent to its makers to be overhauled.

Viewing the Subject as a Monochrome

IN photographing multi-colored autumn-foliage, it is often desirable to consider the subject as a monochrome. To do this, it is only necessary to examine the view through a piece of blue glass, when the colors will seem to disappear and a monochrome will be the result. This is a distinct advantage.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



MEDITATION

DR. RUPERT S. LOVEJOY

Advanced Competition—Indoor-Genres Closes December 31, 1920

THERE is no doubt that genre-photography is becoming more and more popular among serious-minded amateur and professional photographers. Apparently, it matters little whether the genre is made out of doors or in the home—the interest seems to be as great in each case. The recent outdoor-genre competition was exceptional in the number and artistic merit of the pictures that were entered by enthusiastic workers from all parts of the continental United States, far-off Hawaii, Cuba, San Domingo and Canada. In the

present competition devoted to indoor-genres, there will be fully as great an interest. Genre-photography, whether indoor or outdoor, is one of the most difficult branches to master. The human element involved is no small factor in the success or failure of the worker. On the other hand, there is much satisfaction in being able to solve the technical, artistic and human equations that follow one another in quick succession. During the winter, there are innumerable opportunities to produce delightful indoor-genres of friends, family and home. At the outset, remember that the value and charm of a genre is its fidelity to fact. It *must* ring true.

In making indoor-genres, daylight, artificial light and flashlight-apparatus may be used. However, the least expensive illuminants at present are daylight, gas and electric light. A cloudy, bright day is particularly good for indoor-genre photography. There being no sun to cast heavy shadows or annoy the subject by its brilliancy, the camerist may work with comparative freedom. He will need virtually no diffusing-screens; and a sheet, placed judiciously to reflect the light where it is needed, should complete the necessary preparations. Of course, care must be taken to expose correctly and to use the plate or film best adapted to this sort of work. This remark applies equally well to indoor-genres made by artificial light. A nitrogen-filled electric-lamp will produce a strong actinic light that will enable the worker to obtain excellent results at night. However, owing to the very intensity of the illumination, various forms of light-diffusion must be evolved in order to avoid extremely harsh contrasts and unpleasing facial expressions. Care should be taken to make sure that the electric wiring of the house and the service electric current will permit such a powerful lamp to be used without danger of blowing out the fuses and otherwise injuring the wiring in the house. In most cases, the use of a nitrogen-filled electric-lamp will cause no trouble, and it is by far the most effective illuminant because there is no smoke, noise or dust. Two or more of these nitrogen-filled lamps—they may be obtained up to 1,000 candle-power, I believe—should answer all requirements. Then, we have several excellent types of electric home-portrait lamps which use a special type of carbon in an arc and these give out an intense though comparatively soft actinic light. There are also several excellent portrait-flashlamps on the market to-day that may be used with a minimum of danger, smoke and dust. Some remarkable improvements have been made within the last year, and the camerist who expects to do much of this work should obtain all available information from the manufacturers in order that he may obtain an equipment that will meet his needs. Obviously, these outfits are more expensive than nitrogen-filled electric-lamps; but if the camerist can afford one of these outfits, he should be able to produce excellent results. Of course, the use of gas does not enable the worker to place the illumination where it will do the most good. However, a little originality will work wonders, and even a gas reading-lamp may be made to serve the purpose. Those who demur at the use of flashpowder should remember that the modern flashlight-outfit with its flashbag virtually does away with the smoke-nuisance and, at the same time, so muffles the noise of the explosion that the subject is not perturbed in the least. If the worker will use flashpowder according to directions, and with care, there is no more danger to himself or to his subject than there is in motoring, canoeing or swimming. Of course, he who will take risks must pay the price of foolhardiness.

The making of indoor-genres demands an unusual degree of tact, artistic perception and a sense of humor. If the camerist attempts to succeed by assuming a dictatorial manner, or by forcing his subjects to do things that are uncongenial or unnatural to them, he will fail to make the sort of indoor-genres that the jury will approve. I cannot emphasize too strongly the necessity to make the picture conform to the characteristics of the subject. Moreover, do not desert fact to obtain an effect. By that I mean, do not depict father enjoying an after-dinner cigar when he was never known to smoke anything but a pipe; and do not show sister at the piano when she has never

played a note in her life. Even though strangers may not be aware of these discrepancies, often, the subjects themselves will betray the deception by their stiff and "posey" attitudes. The best rule is to stick to truth, no matter how much opportunity there is to resort to pictorial dissimulation.

Perhaps, no picture in all the world makes a greater appeal than one of a baby. Baby-pictures are always of surpassing interest, and unsurpassed difficulty to make. Why it is that doting mothers insist upon clothing their little darlings in a mass of white lace and frills when they are to be photographed, is one of the unanswerable riddles that photographers have been making vain attempts to solve. Of course, white is the most natural color for mothers to use; but that does not make the photographer's task the lighter. Not only do mothers dress up their babies in all manner of finery, but they insist that the baby be placed in the center of another white expanse such as a large pillow, white-lined basket or crib. It is generally impossible to photograph a baby's white dress and obtain detail and softness, and, at the same time, a pleasing picture of baby's face. The dress requires longer exposure than the baby's face and, obviously, baby cannot be controlled long enough to permit the proper exposure of both dress and face to be made. The problem would be greatly simplified if mothers would forego the wonderful infant dress-creations in favor of a truly delightful picture of baby's laugh or smile. In one sense, it is just as absurd to dress up baby for an indoor-genre as it would be to show mother doing her housework clad in an evening-gown. Such pictures do not ring true. "Photograph your subjects as you find them," is a good rule for the genre-photographer to follow, if he would succeed.

The camerist should not lose sight of the fact that there are many desirable subjects for this competition to be found in the business and professional life of readers of PHOTO-ERA. Also, there are many excellent opportunities in the home-life of each one of us. Every day, we all see subjects of great artistic and human appeal but we fail to make the most of them. The subjects for this and every competition are about us without numbers. The fault lies with us and not with any dearth of suitable material. A well-executed indoor-genre of the local grocer behind his counter, the lawyer advising a client, the literary man at his work or even father lighting the morning-fire in the kitchen-stove, are all likely subjects if properly done. Let every camerist attune himself to the human and artistic values in the very simplest of subjects, and he will find that in this manner the masterpieces of old were produced. It seems to me that many times we seek to do the big thing, when by training, natural aptitude and equipment we are better fitted to make a success of the small thing. That is, in this competition for example, some will not compete unless they feel that they have equaled or surpassed the interesting and excellent study on the opposite page. To my way of thinking, this is a mistake and it will result in the stifling of all originality and incentive. Each worker should stand upon his own photographic feet and, regardless of the achievements of others, make his own place in photography. The jury passes upon each picture solely on account of its merit, and without any consideration of the name or reputation of the maker. We welcome the newcomer as heartily as we greet the work of old friends. Hence, let no camerist hesitate to hold his head up with the best of them and thus grow in photographic strength by honest effort and originality. Remember that true merit is bound to win.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two* years' practical camera-activity, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage of the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, *stiff* boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition Closed August 31, 1920

First Prize: Thaddeus S. Hess.

Second Prize: John Griffiths.

Honorable Mention: Oliver H. Stansfield.

The Beginner and the Winter-Months

LAST month, I drew attention to the mistake that many amateur photographers make with regard to giving up all interest in photography during the winter-months. Not only are the opportunities for pleasant and interesting picture-making as great during the winter, but there is the additional opportunity to do much profitable reading and work that the heat of summer makes distasteful. Again, the long winter-evenings offer the beginner the necessary leisure to catch his breath, photographically. That is, to profit by his mistakes and to plan systematically for the work of the future. The following paragraphs are intended for the beginner who is serious, and who is eager to make the most of his photographic investment. PHOTO-ERA is with and for the amateur and professional photographer who is sincerely desirous to make photography the means to intellectual, artistic and financial independence.

In the September number, I pointed out the importance of the care of developed plates, films and prints. What I said then, applies to the present discussion. To save space, I shall omit a repetition here; but I advise the reader of this article to refresh his memory, as I believe that it will prove to be of service to him. Also, I suggested the manner in which pictures might be mounted in albums to the best advantage and negatives be filed so that they would be quickly available.

The making of enlarged prints is one of the most interesting and pleasant tasks that the beginner can undertake during the winter-months. From a carefully selected number of negatives, he can make enlarged prints for his home, den or for suitable Christmas or wedding gifts. There is an individuality about such a gift that cannot be approached by any article that may be purchased in a store. To help the beginner and to make this work a pleasure, there are many styles of enlarging-apparatus which he will find adapted to his needs and economical as well. A visit to his photo-dealer will enable him to select the equipment best suited to his requirements.

After he has made a number of enlarged prints, he may find several among them that will be greatly improved in appearance and value by coloring. The excellent colors now available enable the beginner to do the coloring in watercolor or oils and at a minimum of expense, effort and time. This work is fascinating, and serves the double purpose of helping to make the enlarged print the more attractive and of training his mind and eye to appreciate the value of color.

Those beginners who possess a lantern-slide projector will derive much pleasure from the making of lantern-slides from their negatives. This should be of especial interest to the beginner who has been fortunate enough to make an extended trip to some part of this country or Europe and who has fifty or one hundred beautiful pictures that he would like to show to his

FIRST PRIZE
BEGINNERS' COMPETITION



MY OLDEST SON

THADDEUS S. HESS

friends at the club or lodge. Even if the beginner is obliged to purchase a lantern-slide projector, he will enjoy it and the making of lantern-slides sufficiently to pay for the first expense.

Another bit of work that the beginner can do to advantage is to make prints of his best pictures and mount them in slip-in calendar-mounts. The combination is well adapted to the holiday-season and to occasions where a friend will appreciate a tasteful, appropriate remembrance. Many attractive styles of calendar-mounts may be obtained from photo-supply dealers. Here, again, there is an individuality about the gift that enhances its value greatly.

From a technical point of view the winter-months offer the beginner time to experiment with developers, sepia-toners, reducers, intensifiers, different grades of paper and plates. Without a doubt, certain negatives that were made during the summer would be the better for intensification or local reduction and now is an excellent opportunity to find out *practically* just what these processes will accomplish. Then, too, it is a good time to experiment with a wide-angle lens for interiors, with portrait-attachments, duplicators, ray-filters and other apparatus that requires time to master and to use successfully. Also, if the beginner has not done his own photo-finishing, now is an excellent time to assemble his outfit and learn how to develop and print his own pictures. Right here, let me repeat

that the beginner who does not do his own photo-finishing is missing a tremendous amount of practical experience and many hours of genuine pleasure. Of course, it requires effort; but is there anything worthwhile in life that does not require effort to attain?

In conclusion, I wish to call attention to the matter of the value of thorough and intelligent reading of photographic books and magazines. The amount of well-prepared, reliable and helpful reading-matter that is now available is amazing and the beginner has an exceptional opportunity to obtain much accurate information free of charge. However, he should obtain two or three photographic books that will help him to do better work in his chosen branch of photography. PHOTO-ERA recommends a list of books that is printed regularly in every issue and is kept up-to-date. In addition, the beginner cannot fail to be benefited by the regular reading of two or three first-class American and European photographic journals. In short, the winter-months are well suited to the study of theoretical photography; and, from actual experience, I know that the time put into reading, experiment and the pleasant tasks already mentioned will result in immediate practical benefit. Remember that it is the successful amateur photographer that obtains the greatest pleasure and profit from photography—be one of the successful ones!

A. H. B.



PLOUGHING THROUGH THE STORM

JOHN GRIFFITHS

SECOND PRIZE—BEGINNERS' COMPETITION

Dead-Black Varnish

Now that lenses are made which cover a very much wider angle than is actually used by the photographer—and often have very little hood, or even no hood at all—it becomes very important to have the inside of the camera as dead black as it can be made. The importance of this is brought out by Mr. Eldred Platt in *The Amateur Photographer*. The necessity for this is shown by the fact that it will often happen that of the total light entering by the lens, more than half falls on the bellows and not on the plate or film directly; so that it requires only a very feeble reflecting-power on the bellows for enough light to be sent back on to the sensitive film to fog it perceptibly.

The method of making dead-black varnish which is usually given is by no means the best. A mixture of lampblack and gold-size thinned down with turpentine never dries very black nor very "dead"; and the photographer whose ambition it is to get clear, bright negatives will find that a coating of a really dead-black varnish inside his camera will be a great improvement on anything which such a mixture would give.

Lampblack should be the black from a lamp, but often it would appear that it is something quite different. Let the photographer take a large saucepan or other iron-vessel, clean its bottom, fill it with cold water, and support it just over the chimney of a paraffine-lamp, turned up so as to smoke freely. The job is best done in an outhouse. In half an hour or less there will be a deposit of the most intense black character nearly an inch thick on the saucepan; in fact, it must be looked at from time to time to see that it does not choke the chimney altogether.

This deposit is the real lampblack, and a supply so obtained will be all the amateur is likely to want in a year or two. It may be detached from the saucepan, and rubbed up with a little alcohol to form a thin and perfectly smooth cream.

A very little ordinary spirit-varnish, or a solution of shellac in spirit, added to this and mixed well with it will form the varnish. On no account must an excess of the varnish be added, or the mixture will not dry dead. The quantity required will vary with the strength of the varnish and proportion of color present: but if the mixture of spirit and lampblack is of about

the consistency of a very thin cream, one-fifth its bulk of ordinary spirit-varnish will be sufficient.

Not more than this, but rather less, should first be added, and the varnish tested by brushing it on to a piece of smooth wood. After the lapse of an hour or two, a light rubbing with the finger should not remove any of the black, and the varnish should have a perfectly velvety surface. If the black comes off with a gentle touch, a little more of the varnish will be necessary: but if the surface is at all glossy, more lamp-black and spirit will be needed. A little trouble taken in this way is well repaid by the superiority of the non-reflecting surface which is obtained.

When the mixture has been adjusted so as to be just right, it may be put away in a well-corked bottle until it is required for use, as it keeps any length of time if the spirit cannot evaporate. The varnish is serviceable not only for the interior of the camera, but for other optical appliances which the ingenious worker can often make for himself.

Printing Thin Negatives

WHEN making bromide prints with an ordinary printing-frame, it is easy to adjust the strength of the light to the density of the negative by varying the distance from the light; but when using a printing-box, this is not so easy. It is usual to try to get the proper exposure by altering the time of exposure; but, as every practical printer knows, the effect is not the same, as an exposure which is insufficient to give proper depth in the shadows, when printing from a weak negative, is often enough to penetrate the highlights and give a print which is too flat to be of any value. A better course is to reduce the strength of the light by interposing either a tinted film or one or more thicknesses of thin paper, which may be placed near the lamp; or, if the construction of the enlarger does not permit, immediately under the negative. In the latter case, care must be taken that the paper is free of water-marks and as grainless as possible. Tinted glasses, which may be placed immediately under the negative, are easily made by fixing out an undeveloped plate and dyeing it a very pale yellow or green. A depth which increases the exposure about five times will be found generally useful.—*Exchange*.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Reversed Images

UNDER the heading, "The Topic of the Week," a regular department in *The Amateur Photographer*, appeared some notes of value and general interest on reversed images. A defect from which a great many workers have suffered recently, is reversal. One or more negatives out of a batch, although treated in exactly the same way as their fellows, appear after development to be positives instead of negatives. Very often, it is a part only of the entire image which has reversed.

All these examples are alike in two respects, the reversal is visible only in the least exposed parts of an underexposed negative, and the positive image has a reddish color—quite different from that of the negative-image on other parts of the same exposure.

The difference of color indicates that the positive image is different in character from the rest; it has not been obtained by any straightforward reduction of the silver-image by the developer, but rather by some kind of solvent-action, akin to what in the early days of gelatine-plates gave rise to the defect called "dichroic fog."

When such reversal has been met with, there is nothing which can be done to put the negative right. Possibly, if the reversal were very perfect, and extended uniformly throughout the whole of the image, one might make a transparency on glass from it, either by contact or in the camera or lantern, and use that as a negative; but in every case we have seen, and they now amount to some hundreds, the action has been too irregular to admit of that. All that can be done is to take precautions against it occurring again.

There is one way in which a guarantee against such a result can be obtained, and that is by taking care to expose fully. We have never seen any sign of the action on a correctly exposed negative. Excessive overexposure, it is true, will give a positive image, but on present-day materials that exposure must be a hundred, perhaps even a thousand, times the normal for reversal to take place; so that need not be feared.

Just how such reversal arises it is difficult to conjecture; but the following hypothesis may be offered. To obtain the highest sensitiveness in a plate or film, the emulsion must, of course, be such that the slightest impact of light will affect it; and the developer must be a powerful one, to utilize as far as possible the feeblest change brought about by the light.

We know that if we develop an unexposed plate in a tray by itself for the same length of time as an exposed one, we do not get a clean blank plate, although the edges or any other unexposed parts of the exposed plates are clean. The reason given for this is that, although the total time of development in each case may be, let us say, fifteen minutes, the exposed plates are not in a full strength developer for that time; since, as soon as it begins to act, the developer begins to lose its power, while at the same time the result of its action is the formation of a soluble bromide, a restrainer, which dissolves in the developer, and also mitigates its action. The plate that has had no exposure at all, on the other hand, is in a full strength developer for the whole fifteen minutes, and is more or less foggy.

In the same way we may suppose a badly underexposed negative in a powerful developer-solution may become more or less fogged by the developer within its pores, the greatest fogging-action taking place where the light-action has been least; but where there is a little image to develop, the developer in those parts is to that extent weakened and restrained, so that the fogging is less. A close examination of some of these examples of reversal certainly seems to bear out this theory. [In connection with the subject of reversal an interesting case of it was described in our "Crucible" department in PHOTO-ERA, August, 1919.—EDITOR.]

A Home-Made Ray-Filter Holder

HAVING occasion to use my portrait lens in connection with W. & W. color-filter and plates, I found that the holder for the three-inch square filters was too small to fit over the barrel of the lens. Not wishing to go to any extra expense, I first cut from a plain, gray cardmount two pieces each four inches square with a circular opening in the center of each.

I then cut several strips one-half inch wide and glued them on three sides of one of the squares, building up until I obtained the proper thickness to allow the filter to fit. I then glued the second square on and bound the edges with strips of picture-binding.

With gummed cloth-tape, I built up a circular form that fitted over the lens-mount. The first time around, putting the gummed side out and after that the gummed side of the tape in. This circular piece was then fastened to one side of the square with gummed tape.

After covering the ends of the short pieces with another wrapping of binding, the whole was given a coat of dead black. Two hours' time, and a few cents' worth of material that I had on hand, made me a holder for my set of filters which fits my lens perfectly, and works as well as the metal-holder that is furnished by the manufacturers.

This may or may not be new, but I do not recollect seeing it in print.

EMMETT L. MILLER.

"THE LITTLE PHOTO-SHOP,"
CHAPEAUA, N. Y.

Developer-Variations

AMONG the replies received on the subject of adding caustic soda to an amidol developer is one, suggested, presumably, by the desire to make it more vigorous so as to bring out more of an underexposed image, says an English contemporary editorially. The variations in the composition of developers which have been proposed at one time or another are almost innumerable; but gradually the fact has been realized that in most cases these variations provide only a slightly different means for accomplishing one and the same result. Many of the formulae put forward for "making the most" of an underexposure merely fog the negative. The real test is in the printing-frame or the enlarger; and, when this is applied, it will be found that there is little to choose between pyro-soda, pyro-metol, metol-quinol, amidol, or any others in that respect.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

A MORE natural distribution of the various items would have improved this picture. The fringe of flowers on the edge of the box is a meaningless and artificial arrangement. The cover, which makes a glaring blank space in one of the strongest points in the picture-space, should, I think, be brought down to terra firma from its mysteriously poised position and laid "carelessly" over the box, partly covering the contents. The box should be higher in the picture. The dismembered bouquet might be strewn naturally into such positions as to balance the other objects. A plainer background or one more explainable by the rest of the picture should have been chosen. Longer exposure would have given a more harmonious photograph and better gradation in the light parts. An orthochromatic or panchromatic plate with ray-filter may be used to advantage

in pictures of this kind. As to the subject-matter—although there is an obvious association between candy and flowers I do not think that they combine especially well into one still-life picture.

ROBERT T. CHADBOURNE.



As to the picture presented this month for criticism, I think that if the subject were conspicuously placed in a shop-window, it would undoubtedly attract all the attention hoped for. Such attention would be merited by the care and thought evidently bestowed upon the arrangement of the articles by the photographer. However—and I am sure the maker agrees—the print looks different from the view in the window. Too much contrast, coupled with "over-dressing," distracts the eye, and strikes a harsh note throughout, the white parts being particularly obtrusive. More exposure would have softened the highlights, and relieved the monotony of the darker tones, especially those of the



THE PICTURE CRITICISED THIS MONTH

background. The composition is too centered, adding to the crowded appearance. If the flowers were entirely eliminated, and the box of candy, with the cover, and only one or two of the fern-branches were arranged with a background of somewhat lighter neutral tone, a very good picture would result.

LYNDSEY BOURKE.



ALTHOUGH a show-window of a confectionery store, arranged as this picture was composed would be very pleasing and attractive, and would doubtless attract much attention, as a pictorial composition, it seems somewhat lacking. Simplicity seems to be the keynote of all workers in photography. From a pictorial standpoint, it would seem as if too much has been included in the picture. The candy was the reason for the picture being made, and everything should have been subordinated to that. A pair of the little tongs that is packed in each box, might have been placed near, or on the box, and perhaps a very slender vase, with one or two pinks in it might have been included, but nothing more. From appearances, it would seem that a somewhat longer exposure might have been given with good effect, putting more detail into the highlights. A panchromatic plate, with the proper filter would make a great improvement in result. The candy looks much as if it were raisins. The filter and proper plate would help much, combined with the correct exposure.

GEORGE REED STEVENS.



To my mind there are two rather serious faults in this picture. First, I believe that there is too much contrast between the box and cover on the one hand and the ferns and background on the other. I do not think that the box shows up all the detail it should. More serious, however, is the arrangement of the picture. The methodical scattering of the flowers all around the box and the careful manner in which the

cover is propped up into full view, speak all too plainly of a painstaking "arrangement." It all has a decided air of artificiality. If the flowers and ferns were more or less "bunched" together instead of being scattered all over the picture, and if the cover were resting in a more natural position I should consider the composition much better.

CHAS. H. JEWELL.

Avoiding Reflections

E. F. LIGHT in *The Amateur Photographer* has some interesting things to say about avoiding reflections. When we have to photograph anything under glass, it is likely enough that trouble will arise from reflections from the surface of the glass itself. I find that in all such cases it is best to trace out the reflections to their source, and then apply what seems the best preventive, rather than to adopt some hard-and-fast plan in all circumstances. We cannot photograph a glass-surface without it reflecting something; all we can do is to see that it does not reflect, from the point of view of the lens, something that is conspicuous. The character of conspicuity in such a case depends on contrast, or rather on light. Light-objects near the line joining the camera with the subject are to be avoided. In some cases this can be done by covering them with black cloths, or by holding up a dark banner, with a hole in the center of it, through which the lens is passed. But there are two other ways which I have found very useful. One is to employ a long focus—i.e., a narrow-angle—lens. The nearer the camera is to the subject, the wider is the angle from which all light-objects must be excluded if they are not to show. The other is to use the rising-and-sliding front, which with a long-focus lens may generally be done freely. This allows the camera to be raised or lowered, moved to this side or that, and thus we have a choice of viewpoints which is a great help in dodging reflections. For example, with a shop-front the reflections may seem almost prohibitive; but by getting a high standpoint and lowering the lens they can usually be dodged entirely.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



LOVERS of the quaintly humorous will gaze with interest on the toy-idol sitting for its portrait, the artist being the widely known "Kewpie." What the result will be, can only be conjectured. In order that this all-absorbing topic may not escape the attention of the photographic world, the Editor has caused the picture to be placed on the front-cover, as well as on page 229. The complete inscription on the "Seat of the Mighty" reads: "Billiken—the-god-of-Things-as-they-ought-to-be," which maxim, however, is not calculated to test the quality of the intellectual mind, or to spread terror among the unsophisticated. The artist of the picture, Harry C. Berdan, has certainly departed from the conventional by invading the realm of merry-makers. His composition evinces much ingenuity and humor. Data: February, morning; bright; Century 4 x 5 camera; 7½-inch Turner-Reich lens; stop, F/32; 3-time color-screen; exposure, 70 seconds; W & W Panchromatic plate; pyro; enlarged on bromide paper.

The portrait of a little girl (frontispiece), by Belle M. Whitson, is exceptionally interesting and attractive. The expression of childish naiveté, innocence and sweetness has been rendered quite admirably; and the distribution of the light has resulted in a beautifully modeled head. Rarely have the "windows of the soul" been pictured more gloriously by the camera than in the present instance. Data: October, 2 P.M.; bright; 5 x 7 Portrait-camera; Voigtlander portrait-lens; full aperture; one second; Seed 30; tank.

When the original print of the picture, "The Church Beyond," was first seen by the Editor—seen at the proper distance, it produced a pleasing impression. The objects were well spaced beneath a welcome sky, and the whole landscape was replete with atmosphere. These same qualities are present in the reproduction, page 216, and will be appreciated, at the requisite distance, by the beholder. Data: July, 10 A.M.; very good light; Ica Reflex 3¼ x 4¼; 7½-inch Struss Pictorial lens; stop, F/4.3; 3-time color-screen; 1/30 second; Standard Ortho; enlarged on Artura Carbon Black.

In the "Architectural Subjects," of October, 1919, Elliott Hughes Wendell was awarded Honorable Mention for his view of the Post-Office, at Denver, Colorado, reproduced on page 219. It is a masterly interpretation of the subject, and a highly artistic study in perspectives and in light and shade. There is, thus, much to admire in this exceptionally beautiful, impressive and well-balanced composition; and not the least delightful feature is the finely rendered scale of gradations that marks the entire picture. Data: August, 9 A.M.; bright sun; 3¼ x 4¼ Auto Graflex; 7½-inch B. & L. Tessar; at F/8; 1/40 second; Standard Ortho; P. M. C. Bromide enlargement.

The somewhat unfamiliar view of Mt. Pilatus—a few miles south of Lucerne, Switzerland—reproduced on page 223, appears in response to a request of an ardent lover of Swiss scenery. During one of his several visits to the Helvetic Republic—in 1910—the Editor sojourned in Lucerne, making about one hundred pictures in that fascinating region, including a number of the Wagner villa, at Tribschen. Later, one after-

noon, he strolled in the direction of Mt. Pilatus, the landslide—away from the lake—and noted the unusual aspect of the jagged mountain, as shown in the reproduction of the picture made at the time. Data: November 5, about 3.30 P.M.; sunny; slight haze; 5 x 7 Eastman Cartridge Folding Kodak; Voigtlander & Son's Series III Collinear, No. 4; stop F/12.5; 1/25 second; Eastman N. C. Film; pyro; contact semi-mat print.

Although our popular contributor and versatile artist, William S. Davis, confines his camera-activity to outdoor-subjects, he sometimes indulges in an indoor still-life, like the one shown on page 224. It is a study in light and shade, and, as such, eminently successful. A noteworthy feature is the wonderful realism—roundness and relief—due to the manner of illuminating the jardinière with its plant.

In the "Last Furrow" is expressed a typical aspect of American farming. The various objects in the composition are placed in zig-zag form, as they recede from the beholder, yielding a striking effect in atmospheric perspective.

The most striking figure in American tennis is the extremely youthful Vincent Richards, who, last year, and as a partner of the world-champion, William T. Tilden, performed with extraordinary brilliancy. In the wire-enclosed roof-court, on top of the Wanamaker Building, Philadelphia, he is seen in action, the ball he is about to return across the net, being seen distinctly over his head. The picture is remarkable in that the lens, in its power of definition and penetration, is as successful a performer as young Richards.

If anyone doubts the virtuosity possessed by the juvenile Mozart, let him be convinced of the executive ability of a still younger musician, the baby-pianist pictured by Ralph D. Hartman, page 233. Surely, this juvenile finder of the "Lost Chord" must have made music, whether audible or mute, that gave pleasure to his family-audience. The arrangement of the child-virtuoso at his instrument, amidst the simplest of settings, is "strikingly" happy. Data: April, 10 P.M.; Victor flashpowder; 4 x 5 Revolving-Back Cycle Graphic; 6-inch Wollensak Velostigmat Series II F/6.3; stop, F/8; Seed 30; Elon-hydroquinone in tray enlargement on Eastman Professional bromide D white.

The beauty of tone of a successfully enlarged print, such as "The Fire-Fighters," must be seen to be appreciated. Yet little has been lost in the reproduction of Mr. Bernauer's masterpiece, page 235. The beholder's attention is centered on the fire-boat and the men who are directing the extinguishing stream. Here, as in many similar instances, the source of aid creates more excitement, noise and ado, than the fire that is to be put out. The admirable arrangement of the components of the picture and the skilful subordination of the surrounding objects and masses in order to produce an effective and wholly natural center of pictorial interest, constitute an achievement worthy of the highest praise.

The Bradley Studio, of Georgetown, Kentucky, has made its reputation chiefly through its pictures of children, of which the one presented on page 239 is an excellent example.

The pictures of William Ludlum excel by their illustrative quality. They are more than mere records, for they convey a vivid impression of the artist's idea. He seeks until he finds a suitable medium or he may prefer to bring objects together in an arrangement to suit his purpose as in the case of his "Waiting," in the August number. Here, however, Mr. Ludlum treats a topic that calls for no sentiment, no idealism, but just common, everyday complacency—no trouble, no worry. The photographer as a philosopher, as it were. All the same, the pictures that Mr. Ludlum has selected to illustrate his contention, need no apology. He may well defy the professional critic. And yet, proportionately few are the subjects Nature presents to us that are at once perfect compositions, and require no effort by the photo-pictorialist to adapt to his artistic requirements. Data: "The House on the Cliff"—August; 3A Kodak (postcard-size); 6½-inch R. R. lens; stop, F/8; 1/25 second; N. C. film; pyro; Cyko contact print. "Melody Falls"—data same as preceding.

"The Old Spring-House," page 242, has a rich, sumptuous beauty. It is substantial in construction; yet in alluring, atmospheric mood, the picture appeals irresistibly to the poetic fancy. Who can resist the cordial invitation to enter this enchanted spot—stepping lightly on the little footway, which leads in a graceful curve quickly into the brightly lighted place around the bend. An air of quiet mystery pervades the place, and the visitor would hesitate whether to knock and be received as a guest in that modest cottage, or to ignore it and pass beyond into the place of dazzling sunlight. The element of imagination or of mystery has been expressed with the utmost artistic facility by Mr. Newton. As a piece of pictorial composition it is pre-eminently successful. Nothing could be more delightful than the strikingly graceful line that begins at the left lower corner and sweeps boldly across the picture upwards, and terminates in a protecting mass of foliage at the top of the little cottage. Data: May, 1 p.m.; light cloudy; 5 x 7 Premo; 12-inch Pinkham & Smith Semi-Achromatic, Series I; color-screen, Ingento Series A; stop, F/8; bulb, about one second; Hammer Orthochromatic D. C.; pyro-soda; Cyko Enlarging Plat D. W.

Advanced Workers' Competition

THE "Shore-Scenes" competition finds E. M. Pratt again the winner of the first prize. And justly so. His well-known traits as a first-rate photo-pictorialist are felicitously exemplified in this, his latest contribution to a PHOTO-ERA contest. Mr. Pratt delights in combinations of soft, low-toned masses, although in "The Boatman," he has selected the broad expanse of a brilliantly lighted river opposed to the shore, with its dominating point of interest, in a low key. The picture is in the artist's happiest vein, made familiar to readers of PHOTO-ERA by prize-winning and contributed pictures. Data: June, 9 a.m.; bright light; 4 x 5 Sanderson Camera; 10½-inch Struss Pictorial Lens; stop, F/4.9; Ingento A color-screen; Standard Polychrome; Adulor, in tank; Artura Carbon Black print.

Charles A. Brockaway has achieved a brilliant success in his "The Boy Grown Tall," page 246. The action of the figure in the boat, adjusting the direction of the toy-yacht, is admirable, and the costume, which ordinarily would be regarded as inharmonious in a landscape, easily harmonizes with the high key of the adjacent objects. The quality of the water is superbly true to nature, and throughout the picture,

with its contrasts between water and shore, there is not a disturbing note. Data: August, 10 a.m.; bright light; 4 x 5 Graphic; 7-inch Protar; at F/16; 1/25 second; Orthonon; pyro; Artura Carbon Black.

Maude Lee Eldridge has interpreted the subject for competition in an equally attractive manner, but choosing as her model a little child. The action is naively engaging and produces a pleasing line in a picturesquely portrayed shore. It is to be regretted, however, that the little figure suffers a little by appearing too dark, a circumstance that could easily have been avoided in the exposure or in the subsequent development. Data: August, good light; 3 p.m.; F. P. Kodak; 3¼ x 5½; R. R. lens; stop, F/16; 1/25 second; Eastman N. C. film; M. Q. developer; Azo print.

Beginners' Competition

THE portrait of the little boy, by Thaddeus S. Hess, has much that is commendable—lighting, pose and technique. That the child should be photographed in an usually appropriate costume, is only natural; but the exigencies of artistic taste associated with a permanent portrait should be considered seriously in advance. The white parallel lines of the middy blouse are obviously detrimental to the artistic success of the portrait, and clothing of a quiet pattern, and equally suitable and becoming, would have produced an harmonious and reposeful effect. The expression of the eyes is not easily accounted for. It may be characteristic and truthful. Data: June, 1920; 10.30 a.m.; outdoors; bright sun; Compact Graflex 3¼ x 3¼; Carl Zeiss Tessar F/6.3; 180 m.m. focal length; stop, F/8; 1/20 second; Seed 30; pyro, in tray; Artura Iris E. Smooth.

The picture of the steamboat in "rough weather"—though not comparable to such on the Atlantic—is a very creditable performance, indeed—technically, in particular. The lighting is excellent, and the sky, with just a few small clouds to make it interesting, forms a fitting and pleasing background. Data: May, 10 a.m.; diffused light; 2B Kodak (2½ x 4¼); 6-inch B. & L. lens; stop, F/16; sky-filter used; 1/50 second; Eastman Speedy Roll-Film; Metol-Quinol; print, Velvet Velox Special (Semi-Gloss).

Example of Interpretation

"MEDITATION," by Dr. Rupert S. Lovejoy (page 248), is an admirable example of indoor genre. Data: April, 2 p.m.; good, diffused light outside; 5 x 7 Century View-Camera; 7-inch Wollensak Verito; stop, F/5.6; 6 seconds; 7 x 10 enlargement on Buff P. M. C. No. 8; diffused negative enlarged with an anastigmat. The original print was awarded Honorable Mention in a PHOTO-ERA competition in 1915.

Our Contributing Critics

AMONG the contributions to a recent Beginners' Competition was a print made obviously in a spirit of fun. It is submitted for public criticism (at the request of the Editor) under the title, "A Wood-Nymph." As the subject is a personal friend of the photographer, Miss Mary Hazel Floyd, it is a foregone conclusion that the picture will receive the usually courteous treatment by our contributing critics. Data: 2 p.m.; cloudy; occasional rain; Eastman 5 x 7 view-camera; dry-plate, developed in tray, with M. Q. tube; print on Azo E. Hard.



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Editor's Daily Mail

THE most diverting feature of the daily life of the Editor, is his morning mail. As is to be expected, this mass of letters and packages is of a varied and interesting character, and frequently provocative of frowns, as well as of smiles. If the Editor were asked to enumerate or to classify the correspondents according to the degree of satisfaction they afford him, the list would include the following individuals whose missives are always welcome:—

The subscriber who, in sending a change of address, is bright enough to include his former address. He who fails to give also his former address cannot be located in our subscription-files, which are arranged according to states, cities and towns. A John Smith or an Emil Fischer might be found in almost any city of the Union.

The correspondent, whose pen-written signature is illegible, but which at once becomes clear as a bell when supplemented by a typewritten duplicate. Fancy the result, if this is not done!

The correspondent, who, in asking for extraneous information, encloses a stamped return-envelope, or a stamp or stamps for return-postage properly attached to the letter, or carefully done up in paraffine-paper. Imagine what will happen if there is no enclosure at all! What shall be done with the wretch who, in the summer-time, encloses the stamps so that they are stuck fast to the written page? The attempt to detach such stamps without injury to the writing requires a degree of ingenuity beyond that possessed by the Editor. The usual result is permanent defacement of the letter proper. And why should one think charitably of the offender, who, as an after-thought, places the postage-stamps loosely between the letter and the envelope, so that they are lost when the envelope is "waste-basketed"?

The inquirer who states that he reads PHOTO-ERA faithfully—a fact easily established by our files which shows him to be a regular subscriber. Unfortunately, there are those who assert quite ostentatiously that they are omnivorous readers of PHOTO-ERA, which bit of information—in view of the sender's incorrect spelling of the name of the publication and the incomplete address of the same—may safely be regarded as a piece of unmitigated mendacity. It is simply a ruse to propitiate the Editor!

The stranger who asks for a sample-copy of PHOTO-ERA and encloses twenty-five cents in stamps to pay for it; or one who offers to remit the amount after being informed as to the price. Imagine if you can, patient reader, the receipt of a mere postcard conveying a request for a free copy of PHOTO-ERA MAGAZINE! The sender of such a request has probably attended a performance of "Monte Cristo," where the hero shouts, "The world is mine!"

The courteous correspondent who, enclosing return-postage, asks where a complete list of photo-dealers and camera-clubs in the United States may be obtained. This reads well when compared with the request that the Editor, himself, take the time to furnish such a long list.

The writer who, in response to an advertised request

for a rare copy of PHOTO-ERA, sends it done up *flat*, with pages and corners carefully protected, and not—as has happened frequently—rolled up small and tight, so that it cannot possibly be flattened out and made suitable for binding.

The worker whose communications are legible and to the point. The writer who sends a communication covering many pages but written illegibly in pencil, which, to decipher, would require much valuable time, and which very often cannot be deciphered, at all.

The worker whose pen-written communications are read with facility and who does not mix important business-requests with elaborately-expressed personal matters. It is evident that, during the onerous and complicated daily routine-work, the Editor rarely finds time to wade through a very long letter of an uninteresting, personal character; and, when he does accomplish this unwelcome task, he is often obliged to separate important matter from a voluminous correspondence.

It is a very common practice for employees of a large corporation or business house to use the firm's letterhead in sending a request for a free sample copy of PHOTO-ERA MAGAZINE, and without arranging for the payment for such a copy. We have a quiet resting-place for requests of that nature.

"What Fools these Mortals Be!"

My dear Mr. French:

In the last number of PHOTO-ERA, in the section "On the Groundglass," you mention an extraordinary exhibition of ignorance of photographic matters, entitled "Hardly Believable—but a Fact!"

About three years ago, I came across an incident of a like nature that seems even more extraordinary: I met one day, a friend of mine who runs a Kodak-finishing studio, and, incidentally, sells cameras, films, etc. He told me—and he is a man whose veracity is unquestioned—that he had sold a kodak recently to a man, and furnished him with a roll of film. He carefully instructed him how to make the exposures, etc., and that his customer had returned the kodak to him saying that it was no good; "for," said he—*drawing the film from his pocket and unrolling it*—"I made all six exposures, just as you told me, and you can see for yourself, there is *not a darned thing on the film!*"

My friend told me that he would never have believed that there was a person so ignorant, in this day and age, when about every family in the country has a camera; but he assured me that it was an absolute fact. Until I read your little paragraph in September PHOTO-ERA, I had never heard of another incident even approaching the one I have described.

HARRY FOOTNER.

Overheard

"I'm off!" as the bellows said to the camera-front. "Out, out, damned spot!" as the retouching-pencil said to the pinhole. "You're a stranger to me!" as the print said to its title.—*Exchange.*



ANSWERS TO QUERIES



C. H. W.—Long bellows are required to copy objects natural size or nearly so. Often very satisfactory copies are made by using so-called portrait-attachments and copying-lenses in connection with the lens supplied with the camera. Technically, the best results are obtained by using a plate-camera equipped with a double- or triple-extension bellows and ground-glass for focusing.

P. C. O.—On a fishing-trip, films are preferable to the use of plates unless accurate scientific photography is to be attempted. The almost exclusive use of films throughout the World War is proof enough that satisfactory results are obtained. In your case, weight is an important item; and likewise the danger of breakage must be considered. A small vest-pocket roll-film camera equipped with an anastigmat lens should meet your requirements efficiently. The best negatives may be enlarged to 5 x 7 or even 8 x 10.

F. L. A.—Liver of sulphur, used in sepia-toning, according to Merck's Index, is the so-called "potassa Sulphide"; Hepar Sulfuris; Fries: potass-carbonate with sublimed sulphur, by fusion. Mixture containing potassium trisulphide and potass. thio-sulphate. Yellowish-brown lumps; faint hydrogen-sulphide odor; alkaline, bitter taste.

G. M.—Prints on semi-mat paper are preferred to glossy ones. The outstanding features of a prize-winning print are originality of theme or subject, and artistic interpretation and technical excellence—which latter does not mean microscopic definition! If you will please get a copy of *Photo-Era*, and look it over carefully, you will see what is required.

C. I. K.—I wish to know if a 5 x 7 lens will or will not give better results covering a 3¼ x 5½ plate, than it will covering the 5 x 7 plate; a photographer told me that a large lens covering a smaller plate, would give clearer, sharper definition, also would be a little faster working at the largest stop, F/4.5.

A 5 x 7 lens gives a larger size image on a smaller plate than would a lens of shorter focus. Also as sharp as would a smaller diaphragm or stop with a smaller lens. The smaller lens works the more rapidly, regardless of what your friend may tell you.

J. V. H.—The change from a rectilinear lens to an anastigmat requires close attention. You say that your new roll-film camera, fitted with B. & L. Zeiss Tessar II B F/6.3 lens is causing you more trouble than your old box camera ever did, and that you cannot obtain sharp pictures. Since your new equipment has no groundglass, it is of great importance that you estimate distances correctly. If you have a good idea of distance, and the trouble still continues, it may be due to the fact that the focusing-scale is not properly adjusted. An anastigmat lens must be focused very carefully, as a slight movement forward or backward renders the picture sharp or out of focus. We would suggest that you use stop F/8 and a shutter-speed of about 1/50 of a second, and make several pictures without altering the stop or speed. With the lens and shutter set as indicated, you should obtain clear sharp pictures from about twenty feet in front of the camera to infinity. Should this test not prove satis-

factory, we would suggest that you take the camera to a competent camera repair-man and have him check up the focusing-scale.

B. H. W.—An F/4.5 lens stopped down to F/6.3 is identical in speed to another lens that works at F/6.3. The speed in this case is not a matter of the construction of the lens, but the size of the stop.

L. J. E.—Long-focus lenses generally improve the perspective; at the same time, they narrow the angle of the picture to such an extent that the field of view is reduced. The entire matter depends upon the work in hand. For pictorial photography, it is better to have a lens of fairly long focus than one that is too short.

O. C. H.—A 4-inch lens on a 2½ x 3½ plate is virtually equal to an 8-inch lens on a 5 x 7 plate. In both cases it is the angle included by the lens which is the deciding factor. The size of the plate has nothing to do with it. Should you change the focal length of the lens in question from a 4-inch to a 6-inch and from an 8-inch to a 9-inch the matter would still remain relatively the same.

W. B. C.—If there is depth of focus in a small negative, it will appear in the enlargement; if in the small negative there is no depth of focus, no amount of enlarging will put it there. It must be remembered that enlarging cannot put into a picture that which is not in the negative. With this in mind it is advisable to obtain depth of focus at the time the picture is made.

P. T. H.—The brilliancy of blue-prints may be improved by the following method, though the shadows have always a tendency to block up. Expose a trifle longer than usual, and before putting in water, immerse and leave for about five minutes in a bath of strong ammonia one part to one hundred parts of water. Wash thoroughly—then develop the weak gray print in a solution of citric acid five parts to one hundred parts water. The prints change from gray to green, then to blue. Wash well.

C. P.—Brush development of gaslight prints is not difficult. The print to be developed is first thoroughly wet in water, then placed on a sheet of glass supported at an angle in a developing-tray and the surface water blotted off. The usual developer is diluted with about one-fourth its bulk of glycerine and applied with a rather wide rubber-set brush. It is possible to produce very pretty sketchy effects by this method. A smaller brush dipped in stronger developer may be used to bring out detail, or dipped in glycerine to hold back certain parts.

V. B. E.—It is possible to stain negatives for the improvement of printing quality. If a plate is flat and lacking in detail it may be strengthened by immersion in a solution of gray-blue aniline. The color is absorbed in proportion to the amount of silver reduced, and the printing detail is greatly improved.

J. H. R.—Sodium sulphantimoniate is the chemical designation of Schlippe's salt. It is composed of rather large reddish-yellow tetrahedral crystals that are soluble in water. It is used as a redeveloping-agent for sulphide-toning and for intensifying negatives after mercurial bleaching. It is regularly listed in *Merck's* chemical catalog.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



The Twenty-Second Annual Convention of the Photographers' Association of New England

THE twenty-second consecutive convention of the P. A. of N. E. was held September 27 to 30, in the Auditorium, Springfield, Mass. The still unsettled conditions which prevailed last year, augmented by increased costs all along the line—not omitting railway-fares and scarcity of raw materials needed in the photo-industries—caused a slight falling off in the attendance, although those who were present took a deep interest in the sessions, exhibits, demonstrations and lectures.

An innovation was a series of demonstrations on the platform of the Mahogany Room, of all the artificial-lighting systems represented at this convention. They all were practical, instructive and satisfactory. They not only proved the admirable features of each method of artificial illumination, as adapted to portraiture in the studio and the customer's home, but afforded excellent opportunities for the actual demonstrators (photographers of the highest rank) to show their skill in lighting and posing. The models—comely young ladies of Springfield—showed great adaptability and interest.

The different types of artificial lighting were the Halldorson Portable Flash-Cabinet, demonstrated by Mr. T. E. Halldorson, himself an expert portrait-photographer and successful speaker. The Brieloff Studio-Lamps, also the Mazda C-3 Lamp, operated by Mr. Joseph Brieloff—the present proprietor and manager of the Prosch Mfg. Company and an expert electrical engineer—explained by I. Buxbaum, the eminent photographer of Brooklyn. The Johnson Ventlite, described by Mr. Johnson—who proved himself an admirable speaker—and operated by A. K. Peterson, vice-president of the Association. The Butler-Sanker Light, with Will H. Towles, the distinguished photographer of Washington, D.C., as champion and demonstrator. The new Buckley Light was presented and explained by its originator, L. J. Buckley, of Binghamton, N.Y.

Among the lectures, the one delivered by Ernest L. Major, instructor in portrait-painting at the State Normal Art-School, and with individual studios in Boston, was of chief artistic interest. Aided by photographic reproductions of portraits by old and modern portrait-painters, Mr. Major pointed out the salient features in composition, tones, style and craftsmanship of the masterpieces which have influenced the work of present-day artists. He then compared those important qualities with what the best portrait-photographers are striving to express. His remarks along this line were appreciated by the photographers present who had studied art in a practical way and who, themselves, are able to paint; but to others, they must have been too subtle, too deep. Besides, Mr. Major, accomplished artist with the brush that he is, seems to be unacquainted with photography as a means of artistic expression or of truthful interpretation; yet, his mastery and charm of presenting his subject yielded him the fixed attention of the audience to the end.

The lecture by Gerard H. Thayer, of New York, on camouflage in nature and in war (in the evening and

in the same hall) also drew a large audience, and proved an entertainment of general interest and satisfaction. The stereopticon-views of well-known examples of camouflage in nature—birds, reptiles, insects and four-footed creatures—were numerous and convincing; as were also methods of deception as practiced in the World War by friend or foe, in the army and the navy.

The talk on co-operative advertising, by J. C. Abel, was replete with timely and practical advice, and pleased everybody.

The picture-exhibits were displayed on screens which completely filled the great stage of the Auditorium. There were collections of portraits, landscapes and commercial work by members of the Association and from every section of New England. The most notable of these were portraits by J. H. Garo, Boston; W. E. Noetzel, Newton Centre; M. D. Hanson, Portland; J. C. Bushong, Worcester; Champlain Studio, Boston; Geo. H. Hastings, Boston; A. K. Peterson, Hartford; Notman Studio, Boston; Frizzell Studio, Dorchester, Mass.; J. P. Haley, Bridgeport; Jared Gardner, Plymouth, Mass.; H. L. Bentley, Moresville, Vt.; Seeley Studio, Bridgeport; C. M. Johnstone, Hartford; A. N. Gaouette, Monson, Mass.; C. H. & F. D. Willard (groups of children), Springfield; D. D. Haley and Father, Bridgeport. J. H. Garo, besides impressive portraits, showed four landscapes and one still-life of compelling beauty. W. H. Manahan, president of the Association, was represented by a group of landscapes of great pictorial charm; and D. J. Bordeaux of Springfield, evinced great versatility and skill in a large collection of portraits, genres and animal-studies. Eminent technical ability in commercial work was shown in extensive exhibits by W. E. Meller & Co., of Hartford, and C. W. Thumith, of Newburyport. Among the complimentary exhibits that created unusual interest was an extensive collection of enlarged prints lent by the American Federation of Art, New York, and comprised representative work by such notable American photo-pictorialists as Clarence H. White, Laura Adams Arner, William E. Macnaughtan, Dr. A. D. Chaffee, C. J. Marvin, Dr. J. D. Ruzicka, Sophie Lauffer, Wm. Gordon Shields, Anson Herrick, E. M. Pratt, John Paul Edwards, Oscar Maurer, E. R. Dickson, J. C. Carleton, Laura Gilpin, and H. A. Latimer. Some of the finest prints were totally without names of the artists.

A collection of twenty-five prints by members of the Portland (Maine) Camera Club also created much interest and elicited expressions of admiration. Among the workers represented were F. O. Libbey, R. D. Lovejoy, H. A. Latimer, J. L. Rainville and Roger Paul Jordan.

The prints constituting the National Salon of 1920—as selected at the P. A. of A. Convention at Milwaukee, last August—were also on exhibition, and were admired by many. The photographers thus honored were Frank Scott Clarke, Gertrude Sisters, T. Kajiwara, Will H. Towles, Strauss-Peyton, Lejaren a' Hiller, Pasquale Colotta, Howard D. Beach, Richard T. Dooner and Francis J. Sipprell.

Complimentary exhibits, from outside of New England, were by Dudley Hoyt, Pirie MacDonald, Lejaren a' Hiller (illustrative photography), J. Hakayama,

Geisler & Andrews, the Byron Company (genres and groups), and Hallen Studio, of New York City; Howard D. Beach, F. J. Sipprell, and R. R. McGeorge (portraits and animal-studies), of Buffalo; Will H. Towles, of Washington, D.C.; Visconti's Studio, of Brooklyn; Chas. H. Davis, of Hoboken; O. M. Gatschene, of Oberlin, Ohio; J. E. Mock, of Rochester; Strickler, of Pittsburgh; G. H. Kessleve, of Syracuse; Clarence Stearns (interior genres), of Rochester, Minn.

Entertainments were supplied in the nature of a magnificent organ-recital by Arthur H. Turner, official organist of the Auditorium, assisted by Miss Emma Hutchinson, contralto. Mr. Turner's numbers served to display to the utmost advantage the superb qualities of the municipal organ and to move the audience to genuine enthusiasm. At the conclusion of this rare musical treat, there was dancing, with refreshments and favors, in Mahogany Hall. The last merry-making took the form of a vaudeville show and dance with elaborate favors and refreshments, in the ball-room of Hotel Kimball, on the evening of Sept. 29.

The next place of meeting was left to the decision of the new executive board.

The tribute paid by PHOTO-ERA, last year, to the generosity of the Springfield Chamber of Commerce in giving the New England Association the free use of the Auditorium and Mahogany Hall, and in supplying the organ-recital with two distinguished musicians, also free of charge, is repeated herewith. The photographers of New England have every reason to remember with profound gratitude the splendid liberality and hospitality of the City of Springfield, as shown at the conventions of 1918, 1919 and 1920.

W. A. F.

Manufacturers and Dealers

The following named manufacturers and dealers had space in the main hall:

The Ansco Co., Binghamton, N.Y.
Bausch & Lomb Optical Co., Rochester, N.Y.
Edward Blum (enlargements and colored prints), Chicago,
Boston Guild of Woodcarvers (hand-carved frames), Somerville, Mass.
Bridges Mfg. Co. (mounts and folders), Rochester, N.Y.
Butler-Sanker Co. (artificial light), Cleveland.
California Card Mfg. Co., San Francisco.
Central Dry-plate Co., St. Louis, Mo.
The Chilcote Co. (photo-dealers), Cleveland.
A. M. Collins Mfg. Co., Philadelphia.
Cramer Dry-Plate Co. (dry-plates and Isos ray-filters), St. Louis, Mo.
Eastman Kodak Co., Rochester, N.Y.
C. P. Goerz American Optical Co. (Goerz lenses, Goerz cameras, shutters and prisms), New York City.
The Halldorson Co. (portable flash-cabinet), Chicago
Haloid Co. (photo-papers), Rochester, N.Y.
Hammer Dry-Plate Co., St. Louis, Mo.
Johnson Ventlite Co. (artificial light), Chicago.
L. M. Johnson (picture-frames), Chicago.
Kimball-Matthews Co., Columbus, Ohio.
A. J. Lloyd, Boston, Mass.
Medick-Barrows Co., Columbus, Ohio.
George Murphy, Inc., New York City.
Photo-Appliances Corporation (photo-novelties), Minneapolis, Minn.
Presto Mfg. Co., Pittsburgh, Pa.
Prosch Mfg. Co., Joseph Brieff, prop. & mgr. (flash-lamps, electric spotlights and other novelties in artificial lighting), New York City.
C. R. Reeves,

Robey-French Co. (novelties in cameras, printing-machines and general photo-apparatus), Boston.

Simplex Photo-Specialties Co., New York City.

Special Materials Company, Brooklyn.

Springfield Photo-Mount Co., Springfield, Mass.

Sprague-Hathaway Co. (portraits in oils and water-colors, miniatures, enlargements, mouldings and frames), Somerville, Mass.

Taprell-Loomis & Co. (photo-mounts), Chicago.

The Tablet and Ticket Co. (Sheet-Mucilage; ditto in strips in jars for photo-mounting; embossed (gummed) labels and seals in colors), Chicago, New York City and San Francisco.

Warren Products Co. (photo-chemicals), New York.

Wollensak Optical Co. (photo-lenses and prisms. Innovation—oval reducing-mirror for showcase-advertising), Rochester, N.Y.

The photographic press was represented by *Abel's Photographic Weekly*; *Bulletin of Photography*; *The Camera*; and *PHOTO-ERA*.

The P. A. of N. E. Salon

As no material prizes were awarded at this convention, a salon was instituted to take their place—as was done at the National Convention. Salon-honors were conferred by the jury as follows: J. H. Garo, three (for a portrait, a still-life and a landscape); M. D. Hanson, of Portland, Me.; W. E. Noetzel, of Newton Center; W. H. Manahan, of Hillsboro, N.H.; Nils Ekman, of Bridgeport, and F. E. Geisler, of New York.

Annual Dues

It was voted to increase the annual dues for studio-proprietors from \$3 to \$5, leaving the studio-employees at \$2 a year.

Distinguished Visitors

Twenty members of the Professional Photographers' Society of New York, including Dudley Hoyt, Howard D. Beach, F. E. Geisler, I. Buxbaum, and L. J. Buckley, attended the convention.

Officers for 1920-21

The election of officers for the ensuing year resulted as follows:

President—A. K. Peterson, Hartford.

First vice-pres't—Earl G. Mills, Providence.

Second vice-pres't—E. A. Holton, Boston.

Treasurer and sec.—Perry B. Kenyon, New London.

STATE VICE-PRESIDENTS

Maine—Harry Allen, Livermore Falls.

New Hampshire—H. C. Cutler, Keene.

Vermont—C. E. Shorey, Brattleboro.

Massachusetts—Eric Stahlberg, Northampton.

Rhode Island—Charles Clarkson, Newport.

Connecticut—L. G. Gerry, Willimantic.

Our Apologies to Mr. Coutant

READERS of PHOTO-ERA remember with pleasure the excellent illustrated article, "Commercial Photography," by Harry A. Coutant, that appeared in our September number. On page 115, left-hand column, there is a formula which calls for potassium bromide

and citric acid. Through a typographical error the required quantities of these chemicals read 60 grammes, they should have read 60 *grains* each!

F. R. Fraprie in Europe

THE Publisher is in receipt of a handsome postcard, picturing La Sorbonne—where, many years ago, he took a course of study—from F. R. Fraprie, Editor of *American Photography*. Mr. Fraprie sends greetings and states that he is spending a few weeks in England, France and Germany looking up the photo-industrial situation.

The Promised Mortimer Exhibit

A FRIEND of Mr. Floyd Vail, of the print-committee of The Camera Club, New York, who has just returned from abroad, brought with him a message to Mr. Vail from Mr. F. J. Mortimer, in regard to his exhibit for The Camera Club, which should have been here and displayed last May. Mr. Mortimer stated that the collection, which had been on view in Sweden, and was returned to him to be sent to New York, was lost *en route* to London and has not yet been received. If it is not found, Mr. Mortimer will send some other or duplicate examples of his beautiful work; but the date is uncertain and will be announced later.

Best Book on Commercial Photography

By far the best book on commercial photography is by L. G. Rose, and was reviewed in our October issue. That review was the cause of a great many orders, and we, ourselves, are selling about ten copies weekly. Mr. Rose's work is a practical, up-to-date and beautifully printed book (8½ x 11½ inches), with numerous, superb illustrations. It is cheap at the price—\$1.00. Get a copy *now*, before the edition is exhausted.

The Annual Pittsburgh Salon 1921

THE Eighth Annual Pittsburgh Salon of Pictorial Photography will be held in the Department of Fine Arts of the Carnegie Institute, Pittsburgh, Pa., March 3 to 31, 1921, inclusive. Prints submitted will be passed upon by an impartial and competent committee of selection and those prints possessing the highest merits in artistic expression and execution will be exhibited. Entry-forms containing detailed information and conditions of entry in the salon, may be obtained by addressing Charles K. Archer, Secretary, 1412 Carnegie Building, Pittsburgh, Pa. Last day of entry, Saturday, February 5, 1921.

The Keighley Exhibition

BEGINNING Oct. 15 there will be held for six weeks at The Camera Club, 121 West 68th Street, New York, an exhibition of the work of Alexander Keighley, F. R. P. S., of Stecton, England, which will be free to the public. Mr. Keighley is a member of the London Salon, and is known all over Europe for his beautiful productions of pictorial photography. American photographers should avail themselves of this unusual opportunity to see and to study the pictures of this eminent photo-pictorialist.

Kodak-Guides for the Camerist

THE motoring tourist, whether a camerist or just a plain lover of nature, has more than ever reason to deplore the constantly increasing number of painted signs that disfigure the most beautiful parts of the landscape. The time for their removal may yet come. Patience! But there are signs that not only give information, but do so truthfully, and do not offend the eye. I refer to the little signs placed near the roadside and bearing the notice, "Picture Ahead! Kodak as you go."

On my motor-trip through the Berkshire Hills, last October, I observed many of these friendly guides, and found that in every case an attractive camera-subject appeared a short distance beyond.

W. A. F.

Uniform Excellence a Perpetual Reward

A PROMINENT American newspaper advertises that it will pay \$3,000 for the photograph of the most lovely girl in New England; \$1,000 for the next in meritorious beauty, and two third prizes of \$500 each. It stipulates that, while the prize-winners undoubtedly will be good-looking girls, the awards will not necessarily go to the most beautiful. What is sought are photographs that show intelligence, cheerfulness and like attributes.

Now here is much food for thought, satisfaction and possible regret—for the portrait-photographer. Meditating, he soliloquizes: "Have I been tactful? Have I been conscientious? Have I gone too far in my craze for fuzziness? In my desire to remove freckles and other defects, have I over-retouched the negative and taken out every bit of expression and character? If I have, then my fair customers won't stand a ghost of a show in that competition."

Another photographer will say, musingly: "I should worry. I have made my lady-customers look their best. By my soft lighting, and using my soft-focus lens with good judgment, and with hardly any retouching, I have managed to retain all the beauty, character and expression. At least *one* of my customers will have a chance for that big prize, or I'll quit the business."

Now the second of these craftsmen is always conscientious and painstaking, year in, year out. He never lets up. Consequently, he reaps his reward satisfying his customers, and *keeping them*. When the unexpected happens—like a photographic beauty-contest, with liberal money-awards—he has as good a chance as any one.

One of the conditions of the newspaper's contest is that the photograph submitted must be one that will ensure successful reproduction.

Program of Chicago Camera-Club

THE Chicago Camera-Club has begun its present season with several practical and instructive lectures.

For November, the members of the club will have the pleasure to attend the following lectures, entertainments and classes:

November 3—Illustrated lecture on the Plant-Life of the Dunes by Dr. H. W. Cowles, Professor of Botany at Chicago University.

November 10 is set aside for the selection of prints and lantern-slides for the A. C. C. of A. Interchanges.

November 17—Life-Class for members.

November 24—Lecture on the Chemistry of Photography by P. T. Tarnoski, a professional chemist.



LONDON LETTER

CARINE AND WILL CADBY



As far as photography in London is concerned this is the "Silly Season," for every one is still away on holiday. It has been a record-holiday year, and most members of the photographic fraternity are still absent. But this stagnation of craft-activity, which leaves London quiet, is the lull before the storm; for very shortly the great yearly carnival of the camera will burst on us. The Salon and the Royal Photographic Society's exhibition will open their doors (to be precise Sep. 11 and Sep. 20 respectively) and there will be a great reunion of holiday-making photographers.

Though crowds went on holiday this year, we noticed that they were not accompanied by the usual numbers of hand-cameras. The recovery from the war is gradual, and the kodak has not again become an essential part of the traveler's outfit. Even in Switzerland, it was mostly the Swiss and Dutch who carried cameras—obviously, a result of prosperous neutrality.

But, although the holiday-season separates photographers, and makes news scarce, it is the time for photographic literature. "The Gentle Art of Photography" has just been published for the British Manufacturers' Association, at one shilling sixpence. When a book on photography assures its readers in the preface that, after the perusal of its wonderful pages they "will be enabled instantly to produce perfect photographs," we stand dejected and depressed. Have we not for more years than we care to count been striving after this very end? Often, too, with some experience to guide us—as we thought—and, alas! often failing. Why had not the fates been kind and allowed this "Gentle Art of Photography" to have been published, let us say, twenty years earlier, and so have saved us many spoiled negatives and much vexation? But what a chance for all future embryo photographers! They have but to get this wizard volume and they will be able to produce instantly perfect photographs—a real royal road to at least one of the arts, and a cheap one!

The name of the author of this book is not for publication; but many photographers will recognize its parentage by the easy, lucid and informative style. This momentarily anonymous author, who is also well known for modern fiction, has just been on a voyage of discovery to Czechoslovakia, and we are hoping soon to see the harvest of his camera from that old country with the new name.

The Swiss who, this year, have been making holiday in their own beautiful country in far greater numbers than of yore, have acquired the camera-habit fairly extensively, but with a marked difference compared to the generality of English and American visitors. They are far more frugal with their exposures. It is true, one can often trace them up a mountain by the tell-tale tabs of the film-pack; but they do not leave behind them the absolute litter of tabs one comes across when our countrymen—or yours, dear reader—have passed. It is far from our idea to suggest that they are right, and you and we are wrong in our prodigality. Indeed, from close observation, we are inclined to think that they play for safety, and only photograph the more obvious effects, about which exposure has no terrors; whereas the Americans and English are

more daring, and risk wasting films in the hope that the unusual, the curious and, sometimes, the beautiful may be recorded. On our homeward journey, there were in our railway-compartment two Americans—a young couple from Boston. We were passing through the devastated area of France, and our friends from across the water were busy snapping ruins of houses and blasted trees from the carriage-window in the prodigal manner of their country of origin. The sun was shining straight in on their unshaded lenses. During the long journey, we had many interesting talks, and we learned much about many branches of American thought. They were obviously intelligent and well informed on every subject except—photography. The temptation was too strong. It seemed a pity that such charming people should be so busy storing up disappointment, and so far from home, too. And so, in that European continental express, we introduced our American fellow-travelers to 367 Boylston Street, Boston, U.S.A., and told of the wonderful open sesame to photography called "PHOTO-ERA" that hails from that address. In prompt American fashion, the to them unfamiliar name was made a note of, and we hope that the Editor will be lenient with their devastated area photographs if, on their return, the pilgrims find their way to his office.

Since last we wrote, the *Imperial Handbook for 1920* has been published. This is the annual production of the Imperial Dry-Plate Company. It has an established position in the photographic world of Great and Greater Britain, and its appearance is looked forward to by a wide circle of readers, as it is of many years' standing. This year, most of the space is devoted to useful and severely practical articles on "A Simple Method of Making Enlarged Negatives," "Alpine Photography," "The Photography of Blossoms, Flowers and Fruit," and "Photography Made Easy." All are well illustrated by photographs. The book is presented free by the Imperial Company, at receipt of application to them at Cricklewood, London; but it is so good that it would be well worth paying for. There are also some particularly beautiful reproductions of curves made by a machine constructed and used by Mr. Banfield. These curves are supposed to be of interest only to the mathematician who is well up in the higher regions of Vectors and Co-ordinate Geometry. But they have a beauty apart from their chief business that all photographers can see.

A new dry-mounting tissue has been lately put on the market. It is called "Akron," and Houghtons Ltd. sell it. We have tested the material and easily obtained satisfactory results with an ordinary household iron. One of its good points lies in the fact that very moderate heat is sufficient to obtain perfect adhesion. This, to the amateur-photographer, is an advantage, as a uniformly high temperature is difficult to maintain when working on a small scale. "Akron" is very thin, transparent and even, and the price for these times is not excessive.



BEFORE you find fault with a camera try to make one.

A. SEAMON STER.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

THE AIR-BRUSH IN PHOTOGRAPHY. By George F. Stine. Large octavo. 144 pages. Fully illustrated. Cloth, \$3.50. Cleveland: The Abel Publishing Company. 1920.

Among the several books published on the use of the air-brush, the one under consideration takes pre-eminence. It is the product of an expert worker of the air-brush, a capable photographer and manufacturer of air-brush accessories, and is the last word on the subject. The text is presented as a series of thirty-two practical, progressive lessons, accompanied by large halftone-illustrations, and constitutes an attractive and convincing argument in favor of the air-brush as an indispensable accessory in the up-to-date photographic studio. It is true that, like photoportraiture, air-brush work permits being executed with varying degrees of success, for which reason an unskilled photographer would be prejudiced against the machine and its application. Fortunately, the air-brush needs no champion. It is an established remunerative pursuit, and Mr. Stine demonstrates the ease with which it can be manipulated and beautiful results obtained.

The subject is treated with consummate thoroughness by the author, from beginning to end, appropriate illustrations being used without stint. Amateur-photographers, desirous to take up air-brush work, will find it attractive and, after having become proficient, may wish to engage in it professionally. Mr. Stine's book, certainly, will be found equal to a course of instruction given by an expert craftsman.

PHOTO-ENGRAVING PRIMER. By Stephen H. Horgan. 81 pages. Cloth, \$1.50. Boston, U. S. A.: American Photographic Publishing Company. 1920.

The number of amateur and professional photographers who are becoming interested in the extensive and lucrative business of photo-engraving, has created a demand for a well-written, accurate and not too technical exposition of the subject. This we have in Mr. Horgan's excellent little volume. Part One describes, in detail, the process of line-engraving. Practical suggestions are given with regard to the studio, camera, lens, darkroom, lighting, requisites for negative-making, formulae, preparation of copy, photo-printing on metal and other important steps in the making of a good line-cut. Part Two treats of halftone-engraving, and it is a popular description of the process. A clear account is given of the halftone-screen, requisites for copper-halftones, lens and diaphragm, exposure, etching, staging, vignetting and blocking. A four-page glossary of terms used by photo-engravers, with definitions and synonyms, is a helpful feature. A well-arranged index completes the book. Not only will the camerist obtain accurate and practical information from this little volume, but he may be persuaded to consider photo-engraving as a profession.

PHOTOGRAPHY AND ITS APPLICATIONS. By William Gamble, F. R. P. S., editor of "The Process Year-Book." 12mo. 132 pages. Illustrated. Cloth, \$1.00. New York and London: Isaac Pitman & Sons. 1920.

The chief merit of this handy, little book, is the wealth of valuable material condensed in so small a compass. An admirable account of photography, from its earliest stages down to the present day, is given; also chapters on all important chemical operations necessary to obtain a finished print; carbon and other printing processes; enlarging, copying and lantern-slide making; color-photography methods; scientific applications; cinematography; photo-mechanical processes, including halftone-engraving; industrial applications, and photography during the recent European war. There is a complete index.

OPTICAL PROJECTION—the Projection of Lantern-Slides. By Russell S. Wright. 87 pages. Fully illustrated. Cloth, \$1.60. New York and London: Longmans, Green & Company. 1920.

This important, little book appears timely—when the illustrated lecture depends for its success on the skilful operation of the stereopticon. The lanternist must also be ready to readjust it, if things go wrong; for to keep the audience waiting in the dark, should the light go out, or in suspense should one of the cylinders give forth a hissing sound caused by the escape of gas, is annoying to the audience. He should be prepared to guard against, and meet, any emergency.

Mr. Russell's book is devoted to the construction and management of the different types of optical lantern or stereopticon adapted to lime-light, acetylene and electricity. One of the nine chapters describes the accessories of an illustrated lecture—the lantern-slide boxes, screen, reading-lamp, and signals. The information imparted by the author is highly authoritative and up to date, and appeals to every conscientious lanternist.

THE GNOME'S TREASURE. By Alice and Clarence Ponting. 12mo. 8 photo-illustrations from life, by Clarence Ponting. Price, 2/6 net. London, W 1: Mills & Boon, Ltd. 1920.

This is a fascinating little story for children, told in a naïve, convincing way, and deserves the popularity it will undoubtedly enjoy. Of particular interest to the amateur-photographer, are the illustrations, which are admirably interpretative. Mr. Ponting has used juvenile models in the open, together with an adaptable dwarf manikin (the gnome), and demonstrates how pleasingly and successfully living models may be employed to exemplify telling incidents in fiction. Publishers pay liberally for successful work of this kind, and we advise interested amateur-camerists to inspect this admirably illustrated book, which is one of a series of four, written and illustrated by the same authors. The other three volumes, also sold at 2/6 each, are: "The Land of Nursery Rhymes," "The River of Dreams," and "The Riddle of the Wood."

The A B C of Artistic Photography

FRIENDS who have written to us for copies of the A B C of Artistic Photography—which book went out of print over a year ago—and are still interested may be glad to know that by persistent advertising we have at last been able to procure several copies. The price is \$2.50; 20 cents additional for postage.



WITH THE TRADE



New Ansco Catalog

THE new Ansco catalog of amateur cameras, just received, makes the usual good impression of finely-built instruments of precision. It is attractively printed in two colors, and its very readable pages should serve as an excellent guide to the judgment of the prospective camera-buyer. The illustrations are plentiful, and depict both the cameras and distinctive features of construction and equipment. Several new refinements are to be noted. A valuable feature which makes the catalog good for reference is the set of depth-of-focus tables for lenses of $6\frac{1}{2}$, $4\frac{3}{8}$ and $3\frac{1}{2}$ inch focus. Copies of the catalog may be obtained from photographic dealers or from the Ansco Company, Binghamton, New York.

A Progressive Photo-Dealer

ON more than one occasion our attention has been called to The Photo Shop of Philadelphia, 2234 North 29th Street, Philadelphia, of which Mr. Henry J. Wiegner is the progressive proprietor. Recently, he began to print and to distribute to his customers a little four-page house-organ, "Store-News." After reading this interesting little folder we commend it and the idea to the attention of our friends and subscribers.

Warren J. Armstrong—Impostor!

WE learn from Burke & James, Inc., Chicago, that a man posing as Warren J. Armstrong obtained a Universal motion-picture camera with dissolve, two-hundred-foot film-capacity—for which he gave a spurious draft. The number of the camera is 2604 and the lens-number 3050 268. This man registered as J. J. Kumer at a New York hotel and left without paying his bill. He is about five feet eight inches tall, slender build, thin features, black hair parted in the center, gentlemanly in appearance and conversation, claims to be connected with Smithsonian Institution, Washington, D.C., and to be engaged in volcanic research-work. Information leading to his arrest will be appreciated by Burke & James who offer a reward of fifty dollars for the return of the camera in good condition.

Some Photo-Finishing!

A PROMINENT English business-man, from London, who is an ardent camerist, made an extended visit to the United States, last July, visiting the various National Parks and finishing with Niagara Falls. He exposed a goodly number of roll-films, which he intended to develop, himself; but, not finding the time, he waited to have them finished in Boston, from which port he was to sail for England during the latter part of July.

At the suggestion of some one who thought he knew, our English friend patronized the finishing-department of a prominent Boston photo-dealer. When he received his prints, he was dumfounded to find them extremely poor—underexposed, flat, muddy and with-

out detail; indeed, they were practically worthless to him, although the negatives, themselves, were fairly satisfactory. In his dilemma he called upon the Editor, who told him that the firm which had produced such poor work for him did not operate a really first-class photo-finishing department; as a matter of fact, the firm had once ruined the results of an entire photographic trip of a well-known scientist to Central America, and had been forced to pay heavy damages by order of the court. The Editor advised his caller to have a set of prints made by a certain expert close at hand. Well; these last prints were infinitely superior, in every way. They were uniformly clear and brilliant, filled with detail and gradation, and were made on first-class paper. The worthless prints cost seven cents each; the good ones ten cents each, but were well worth the difference in price.

First-class photo-finishing in Boston is not surpassed, anywhere. It may be obtained from the Robey-French Company, Pinkham & Smith Company, Solatia M. Taylor, Charles H. Chase, and James C. Kerwin. The Editor can vouch for the skill and reliability of each of these firms, whose availability will be appreciated by the multitude of tourists who visit the city of Boston.

A Timely Warning!

A RECENT issue of *Die Photographische Industrie* contains a warning to its readers to beware of "exceptional offers" in chemicals of standard manufacture. It seems that careful research in the photographic laboratories of the Agfa Co. revealed the amazing fact that ordinary "cooking-salt" was being sold under the name of "Agfa-Metol"! Moreover, the container was clearly copied after the original package. It is believed that this fraud originated through an offer—far below the current price—which appeared in a professional periodical. It will be well for amateur and professional photographers in the United States and Canada to investigate thoroughly all "exceptional offers" made with regard to standard chemicals manufactured by firms of unquestioned reputation.

Reliable Business-Opportunities

PHOTOGRAPHERS, whether amateur or professional, who are looking for opportunities to engage in profitable sidelines or important business-enterprises, are asked to consider seriously those that are advertised in this magazine. The Publisher adheres to his policy to advertise such business enterprises, as the sale of studios, valuable negatives, etc., *only* when they are accompanied by strictly first-class and satisfactory references.

He investigates, personally and carefully, the character of each advertisement, to ensure its absolute reliability, in every way.

Each month, the Publisher rejects advertisements of photo-specialties, sales of studios, and other attractive opportunities, simply because he is unable to guarantee their integrity. At the present time, he is prepared to furnish information regarding a number

of worthy and highly profitable business-opportunities to those who are seriously interested.

PHOTO-ERA is now advertising several attractive offers, including an important and highly prosperous professional portrait-studio, in a large manufacturing city of Massachusetts, and the sale of several hundred valuable negatives of beautiful and popular Cat-Studies, by C. E. Bullard, of Peterboro, N. H. We shall be glad to furnish any special information desired.

Stolen Cameras

ALTHOUGH the photo-press does not often report losses of cameras by dealers and individuals, it does not follow, that these losses are few. Quite the contrary is the case. Detectives are quietly employed, and much of the stolen property is recovered.

In Germany, stealing cameras and lenses seems to be the order of the day, to judge by the long list of stolen cameras and lenses of many makes and types of standard makes, and of great value, published in a recent issue of the *Photographische Industrie*.

What is Grippit?

"GRIPPLT" is the trademark of a new and original product—a liquid adhesive that is at once strong, flexible, stainless, transparent, water-proof and non-inflammable. It sticks paper, cloth, leather, rubber, metal, glass or wood. "Grippit," therefore, is universal in its application. It is equally efficacious in mounting photographic prints; mending a defective camera-bellows, a broken tripod of wood or metal, a torn camera-case, a broken tray (be it of rubber, porcelain, composition, glass, wood or papier-maché), a broken or cracked graduate or bottle; gluing prints or pictures to glass paper-weights, and for innumerable other and non-photographic uses.

Furthermore, by its peculiar nature, "Grippit" is not affected by climatic changes and will not deteriorate in its container. The product is pure and clean, and can be applied with the fingers. Any smears are quickly removed from either paper or fingers by simply rubbing. Containing no water—like paste or mucilage—"Grippit" will not wrinkle even the thinnest tissue-paper. Obviously, this new product—the result of American brains and ingenuity—now fills a long-felt want not only in photographic practice, but everywhere, and its rapidly increasing popularity is but natural.

If your photo-dealer or stationer does not carry this remarkable product in stock, he misses a chance to do you a real service.

Monthly Report of Recent Patents

THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending twenty-five cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of September, the last issues of which have been disclosed to the public.

Patent, number 1,348,153, on a Photograph-Negative-Developing Frame has been granted to Elijah B. Core, Youkers, N.Y.

Malcolm Boyd Boyce of Haverhill, Mass., has been granted patent, number 1,348,778, a Reflex Focal-Plane Camera.

Device for Washing Photographs, patent, number 1,348,881, was issued to Elisee Eugene Kleine, of Rosethorn, Saskatchewan, Canada.

1,349,384, a Photographic Platen, has been granted to Hervey H. McIntire, of South Bend, Ind.

Color-Filter Negative and Process for Preparing the Same is a patent which bears number 1,349,956, and was invented by Joseph Arthur Henry Hatt, Brooklyn, N.Y.

Glen J. McDowell, of Chicago, Ill., assignor to Burke and James Inc., has received patent, number 1,349,972. The patent is a Photographic-Plate Rack.

Patent, number 1,350,256, a Photographic-Printing Machine, has been issued to Alfred E. Kaiser, Seattle, Wash.

A Film-Developing Tank, patent, number 1,350,762, has been granted to Gilmer Winston, Memphis, Tenn. Bertell W. King, Brooklyn, N.Y., has invented a Means for Inscribing Unexposed Photographic Films, Plates or the Like. Patent, number 1,351,762.

William F. Folmer, Rochester, N.Y., patent, number 1,351,998, has been granted his patent with assignments to the Eastman Kodak Company. It is a Photographic-Film Sheath.

Patent, number 1,352,109, on a Roll-Film-Apparatus, has been invented by George C. Beidler of Rochester, N.Y.

Camera is the title of the invention of Carl G. Johnson of Eau Claire, Wis. Patent, number 1,352,134.

Wall's Dictionary of Photography

OUR many friends who have ordered copies of this standard work—which we have been unable to furnish because the supply in this country is exhausted and none can be procured in Europe at the present time—are informed that the publishers are preparing a new edition. We regret to be unable to state when this new edition will make its appearance; but we hope that it will be before Christmas.

Standard Books at Old Prices

READERS interested in standard books on photography will please take notice that after November 1 the price of Professional Photography, by Hewitt (two volumes), will be \$1.25 post-paid, for the two; advance-price, \$1.75. PHOTO-ERA has on hand, however, a few copies, which will be sold to its readers at the old price of \$1.50, until the supply is exhausted; after which the price will be \$2.50. First come, first served!

Pursuing this policy, PHOTO-ERA will sell other standard photo-books at the old price, until the present stock is exhausted:

Pictorial Photography in America, 1920, \$2.50, post-paid in the United States; advance-price, \$3.50.

Topsy and Turvy, by Carine and Will Cadby, \$1.50, post-paid; regular price, \$1.60 plus postage.

Practical Kinematography, by Talbot, \$1.35, post-paid; advance-price, \$1.50 plus postage.

Photograms of the Year 1919 (current issue), cloth, \$2.00 post-paid; regular price, \$3.00.

Retouching and Improving Negatives—Photo Miniature (out of print), 35c.; advance-price, 50c.

Behind the Motion-Picture Screen, by Lescabour, \$3.50 plus postage, according to zone (weight three pounds); advance-price, \$5.00 plus postage.

It is to be understood that the above-mentioned books are to be sold at the *old price*, as indicated; and enterprising readers will do well to take advantage of this offer.

DECEMBER

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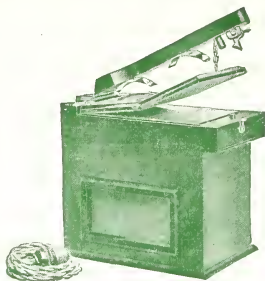
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The Camera in the Windward Islands

In Two Parts

HERBERT B. TURNER



LONG about the first of the year I got devilishly restless. I wanted to get away from our newspapers, our business-conditions, our "verboten" signs, and get out of the United States and mentally stretch, as it were. I wanted to have the privilege to order a cocktail, if I should happen to want one; in other words I desired to be free and have elbow-room and to get a chance to breathe free air.

I could not spare the time to go over to Europe, and thus was somewhat in a quandary where to strike out for, until one day I happened to pick up Sir Frederick Triev's charming book, "The Cradle of the Deep," which mentally carried me to the West Indies, with its lands of summer and ever-blue seas. I read next "The Book of the West Indies" by Verrell, and that settled the matter. I hurried down to the steamship-agent's and booked myself and wife for a round trip to the American, British and French Windward Islands, by the Quebec Steamship Company, whose boats sail from New York.

I had the curiosity to see our Virgin Islands. I thought that the British might be interesting; but my great longing was to see the French, for I knew from experience gained from many journeys that where the French ruled and colonized, one found contrast from our own civilization, and, for a time at least, a pleasing contrast.

Of course, cameras and photographic supplies had to be thought of as well as clothing. The clothing problem was an easy one, for knowing what the winter-temperature is here, and, from past experience, what it is a few degrees above the equator, it merely means that you must put in your trunk the thinnest clothing you have, including some Palm Beach suits, and in your suitcase heavy underwear for the voyage, wearing your ordinary winter street-clothing until it gets too warm and a change is needed for comfort.

The photographic equipment caused me more worry; for, although I had had a certain amount of experience in Algiers, Honolulu (and Boston in summer-weather), I had read here and there so much about the difficulties with plates and development in the tropics, that I began to think that in the Windward Islands I had a problem on my hands. The Eastman Company sent me their book on tropical development, and I read some English pamphlets on the subject. On looking the matter up, I found that the Islands in question rarely have a temperature, summer or winter, above eighty-five degrees in the shade at mid-day, and from sixty-seven to seventy at night. Common sense coming into play told me that, if one could produce negatives that were passable here in New England with the glass sometimes standing at one hundred and the humidity great, I had best forget the subject and proceed as usual. I took one precaution—or I should say two—in that in ordering my films I had them packed in air-tight tin-cases, a thing the Eastman Company does where the product is bound overseas and to warm countries. The extra cost is five cents a tin. The other precaution was to mix up a half gallon of chrome-alum fixing-bath just before sailing.

I took my Richard Verascope (stereoscopic camera), for which I carried Imperial Special Sensitive Plates for a first choice, and Ilford Screened Chromatic plates for second choice. The Imperial Special Sensitive I had used in Algeria and Hawaii with splendid success, in that they render cloud-effects beautifully and give a clear, sparkling negative free of chemical fog. The few Ilfords I used did not produce, for me, anywhere nearly such fine negatives.

For an ordinary camera, I had my 4 x 5 Speed Graphic with a seven-inch Zeiss Tessar, for which film-packs were selected in preference to plates on account of weight and bulk.

I lent an Ansco Speedex equipped with a Goerz Dagor lens to a friend, who was going along on the trip, for I knew that I could borrow it, when needed, and he would have the job of carrying it and keeping it filled with roll-film.

Developing-tanks, a light tripod, two large focusing-cloths, one for the port-hole, the other for the stateroom-transom when not in legitimate use, a changing-bag, Eastman pyro-powders, color-filters, and a Burt meter made up the rest of the photographic equipment, not forgetting a camel-hair brush and thermometer.

Thus, on January 13—a Friday remember!—we sailed out of New York Harbor on the “S. S. Manoa,” which had been a German ship, but which was now sailing under the American flag and managed by a Canadian company. Truly, the only good thing about the combination was the German part. The ship was well built for rough seas, and was staunch and comfortable, for what it was—a cargo-boat fitted to accommodate about sixty first-class passengers with due regard for their ease. It had plenty of deck-space, a pleasant smoking-room, ladies’ lounge and dining-saloon, but in no sense did it try to keep pace with the luxury afforded by Atlantic passenger-steamers. It was a good, slow, “homey” craft with a negro crew and white officers. The table was very fair. There was a closet-bar which was opened just as soon as the pilot disappeared over the side of the ship outside of New York Harbor. Whiskey, beer and wine were offered at profiteering-prices—profiteering-prices because we found that in the West Indies the prices that were paid for liquor were the same as here in 1914. The round trip to Barbados cost \$190 and up, first-class, and the \$190 accommodations were as good as the \$225.

We had over fourteen hundred miles to go before reaching our first port, St. Thomas, and, as is my luck, we had to beat into a gale four out of the seven days. The gale increased steadily and the crockery decreased until, on the last day of it, several meals had to be cooked over before they reached the table. On this day, the ship took a sudden list on the crest of an extraordinary wave that caused the smoking-room to vomit men, the lounge to send its occupants head over heels and passengers on deck in a struggling mass into the scuppers. The deck-steward was lost overboard in a sea no man could live in. When the ship keeled over, I thought that she was going to turn turtle, and was scared white. In twenty odd crossings, most of them in fall and winter, I had never seen a ship go over so far. We circled about the spot where the deck-steward had last been seen, but after two hours’ search had to give him up.

It grew milder each day of the voyage until on the sixth we had changed into summer-things. On the seventh day, we sighted first the mountain-covered island of Porto Rico at about four o’clock and, an hour or so later, St. Thomas began to rise out of the sea.

After seven days at sea, to sail into the nearly landlocked harbor of Charlotte Amalie, the capital of St. Thomas, is like entering some enchanted realm, especially if, as in our case, the island and city are lighted at the time of one’s approach by the intense light of a tropical moon. The mountains were silhouetted against the moonlit sky; the ivory white city, which from the water’s edge stretches up over the nearby hills, dotted with clumps of cocoanut palms and shade-trees unfamiliar to our Northern eyes, and aglow with many electric lights, seemed more like a city of dreams than one of reality. The air was balmy—like one of our summer-nights, only ever so much softer.

As the ship docked at a quay a mile or more from the city proper, we were soon on shore and on our way to town along a cocoanut-palm-arched road that ran beside the softly lapping waters of the bay. Soon we approached low, white villas amid tropical gardens abloom with hibiscus and the exquisite purple of the trailing Bougainvillea from which sprang various species of palms, as well as calabash, breadfruit, and other trees of this land of southern seas. Climbing a hill, the road made a sharp turn, and below at our feet lay Charlotte Amalie, with its thirteen thousand souls, in all its glory, bathed in moonlight, its houses seemingly white, with red-tiled roofs, relieved by masses of green.

Soon we entered its streets to find ourselves amid houses that suggested those of Spain, perhaps, more than any other land. Coming, at length, to a hotel of quaint design, with an open-air dining-room which commanded through its arched outer columns a view over a palm-shaded park, and the harbor with its shipping and lights, to the mountains beyond, we selected a table and ordered liquid refreshments not to be had in the North these days. Here we sat well into the night, sometimes almost wondering if the superb view before us really was of this earth.

The next morning, camera-laden, we were afoot early, and made our way to a hill half way between the ship and the town, upon the summit of which stands an ancient tower in the center of an old fortification, said to have once been the stronghold of the famed pirate, Edward Teach, commonly spoken of as “Blue-beard.” Here, spread out before us, was a scene which, for sheer theatrical beauty of form and color, it would be hard to rival this side of

the Atlantic; for the sapphire-colored bay with its shipping lay below us, all but surrounded by an irregular mountainous arm; a city of white and red, amid its gardens and shade-trees, stretched for a goodly distance along the water's edge and sprawled over a nearby hill, upon the top of which rose another tower known as Blackbeard's Tower. Behind all, like a mighty protecting wall, stood the green-robed mountains.

exposure is required for tropic vegetation in order to avoid harsh contrasts and get detail in the shadows, we increased our exposure, I setting the focal-plane on the Graphic at $1/25$ of a second and opening up a trifle less than $F/16$. On reaching the top of the hill and climbing Blackbeard's Tower, we got another wonderful view which I recorded very successfully at $1/40$ of a second at $F/16$.



HARBOR OF ST. THOMAS

HERBERT B. TURNER

Following the speeds indicated by the Burt Meter for a slightly hazy atmosphere, on the mid-summer table of latitude 30, I made several exposures at $1/40$ of a second at $F/22$ of the view, and of vistas close at hand $1/40$ at $F/16$.

Descending to town, we wandered through one street after another, finding much that was charmingly picturesque to record either with the stereoscope or the Speed Graphic. My friend was snapping away with the Speedex at $1/25$ of a second at $F/16$ as a working-basis, while I used the Verascope at $1/100$ at $F/8$. As we got up on the hill, where the better residences are situated, we found a greater amount of foliage to reckon with. Remembering my experience in Hawaii, which taught me that ample

We found the city not so white on close view by sunlight, for the houses were softly tinted by time and the hand of man. Thus there were grays, light blues, pink and yellow, as well as white. In numerous places balconies hung over the sidewalk, and sometimes palms leaned out from walled enclosures. St. Thomas certainly is a picturesque oasis of the sea; and I would dwell longer upon it, but this is hardly the place to write of history, commerce and scenic details.

That night I locked myself in my stateroom, blocked up the port-hole and transom with the focusing-cloths, and by the aid of some ice, developed, maintaining a temperature of 65° . I ascertained that the longer exposures given above gave me the more satisfactory negatives



CHARLOTTE AMALIE, ST. THOMAS

HERBERT B. TURNER

with the right amount of detail in the shadows, yet registered nicely any clouds there might be drifting about without the aid of a filter.

I also discovered that developing in a closed stateroom in a warm climate was very unpleasant. The washing-water had to be used with care, for fresh water is precious on shipboard. I had to go to the pantry for a small pitcherful, pour it into the hand-basin, put the films in and turn them over and over. I had to keep replenishing the water by constant journeys to the source of supply for forty minutes. The plates were washed in their developing-tank by moving the rack up and down in a constantly-changed supply of water. The chrome-alum fixing-bath did its work well, so that in the warmer wash-water there was no frilling. An electric fan in the stateroom quickly did the drying. The whole episode lasted over two hours, when I wanted to be on deck enjoying a smoke and the cool breeze amid good company. I made up my mind that I was not a photographic sport, and I would rather lose the pictures that I might make in the future than go through the process again.

By this development, I had found the basis for calculating exposures; and I determined to follow it. As I used up each film-pack, I replaced it in its carton and wrapped it up in oiled paper;

but I did not use the tin-holders, for they retain moisture. Later I bought some rubber-sheeting; and, after drying sheeting and film-packs in the sun, did them up in bundles and sealed them with adhesive tape. The plates I treated in the same way.

Let me say here that a month or so later, when I developed at home, I got even finer negatives than on shipboard; and I found no deterioration, spots or blemishes, caused by the sea-voyage or climatic conditions of the islands. In every case, where I did my work properly, I got fine crisp negatives, and where I did make a mistake, it was usually on account of under-exposure, of which more anon. I miscalculated my exposures amid thick tropical foliage. The Speedex yielded good negatives when opened up to F/6.8 at a slow 1/25, where the focal-plane at the same speed at F/9 gave a negative that had to be intensified to get a fair print, and two were hopeless.

The tripod and the focusing-cloths were never used, for, although it never registered above 83° in the shade, it was often over 100° in the sun, and at that temperature one is much happier traveling light. The focusing was done with the lens opened up to F/4.5 and then stopped down.

From St. Thomas on, the trip through that

extensive chain of mountain-tops, that protrudes out of a sapphire-colored sea, from Porto Rico to South America, known generally as the Windward Islands, is one of great charm. The ship sails usually between islands late at night, and approaches a new port about breakfast-time the following morning, where, coming to anchor, it lies some half mile off shore during the day, giving one plenty of time on shore to motor over

we found ourselves at St. Croix, the largest of the American Virgin Islands, an island less theatrical in aspect than St. Thomas, but, perhaps, more beautiful in its vivid greenness and tropical splendor.

One first sees it lying in a turquoise sea, girdled by a beach of white sand, fringed by gracefully bending cocoanut-palms, back of which are vast plantations of light-green sugar-



STREET IN ROUSSEAU, DOMINICA

HERBERT B. TURNER

a goodly part of the island and see the town and nearby villages.

This series of mountains gradually increases in height and rich tropical beauty, with one or two exceptions, from St. Thomas, with its range of a little more than fifteen hundred feet, to Dominica, where the peaks reach to an altitude of over a mile. From Dominica the mountains gradually decrease as one proceeds toward Trinidad.

In this chain of garden-spots upon a lovely sea, we have a history of discovery, dating mainly from 1493; colonization, buccancering, and international strife most fascinating to read—until to-day, this group of islands flies the flags of the United States, Great Britain, France and Holland.

Thus on the morning, after leaving St. Thomas,

cane, relieved now and then by clumps of foliage of a darker green. Inland gentle hills roll up higher and higher until they meet the mountains. Here and there, small settlements are discerned, and sprinkled over the island, adding picturesque quality to the scene, are old stone-towers, once wind-mills a century or so ago, but now largely in ruins and reminding one of ancient castle-keeps.

We landed by the aid of small boats, at the little town of Frederikstād, a clean, regularly laid-out place, white in tone, with red roofs shaded to some extent by palms. But Frederikstād is of little interest to tourists, so, hiring a Ford at a nominal cost, we drove through a delightful country with many picturesque features to Christianstād, a dear little city, the

capital of the island, which lies some fifteen miles from Frederickstädt on the other coast. The architecture of the town is distinctly "old-world," and one is reminded of delightful European spots that are occasionally met with in little-traveled sections. Some of the buildings are bright blue, some red; but softer tints and white predominate. Trailing flowering-

vines grow over many of the houses, and palms and trees of the south offer shade and pleasing contrast. The town contains many architectural bits and vistas that appeal to the user of a camera. We spent a number of hours wandering about its streets and water-front before returning to Frederickstädt and to the ship.

End of Part I

Some Things You Should Not Do—and Why

ARTHUR G. WILLIS

HE rule-of-thumb photographer often succeeds in producing excellent results. This is largely due to the fact that he usually combines a considerable amount of common sense with no small degree of manipulative skill. But there are a number of points which crop up in practical work in which common sense alone is not a sufficient guide, and when some theoretical knowledge will frequently prove to be of the greatest practical importance. It is proposed to set out a few of the many cases in which this holds good. Usually it will be noted that the dangers you are warned against are the result of a secondary action, and can hardly be foretold unless the theory of the processes involved is understood.

You should not use very strong fixing-solutions. It is generally recognized that solutions at very different temperatures are likely to strain the gelatine film, and set up frilling and blisters. Exactly the same effect may be obtained by using solutions of greatly varying densities. If it is ever necessary (it never should be) to use fixing, or any other bath, of very great strength, the negative or print should not be transferred straight from it into pure water, but should be placed first in a bath of normal strength, in order that the strain on the film from the change of density may be more gradual. It may be worth pointing out that it has been proved that a strength of fixing-bath of over eight ounces of hypo to twenty ounces of water not only adds nothing to the speed of working, but even makes it slower, as the more dense fluid takes a longer time to penetrate the film.

You should not focus with a large stop, stop down, and expose without re-focusing. Of course, this is often done, and with a few types of lenses it does not matter. But with most types the only way of obtaining really accurate focus is to use the same stop when examining

the image as you intend to use for the exposure. If you use a small stop it will, of course, be difficult to trace any error on the negative, but it will be there. The stopping down of a lens is simply using only the center of it, and that portion often has an appreciably different focus from that of the whole lens.

You should not make up solutions containing potassium metabisulphite with very hot water. It is true that this assists very greatly in dissolving a somewhat stubborn chemical; but, at the same time, it decomposes it, making it less effective, if not actively harmful, in the solution.

You should not keep or use sodium sulphide anywhere near stocks of plates or paper. It is not an uncommon procedure to sulphide-tone prints in the printing-room, where paper may be stocked. If this is done, the fumes from the sulphide will penetrate the wrappings of any sensitive material in reach, and cause endless trouble with spots and patches of fog. The results are much the same as when the materials are stale.

You should never lay out wet prints on any paper *other* than chemically pure blotting-paper. This is done sometimes when a big batch overflows the usual drying-space, and when damping down prints for wet mounting. It may be fatal to the permanence of your prints, most papers being bleached with chemicals which are not thoroughly washed out, the residues of which will have deadly effects on any print placed on it when wet.

You should never use a freshly-made solution until all the constituents have dissolved. I have often seen this done, especially with developers when the sulphite and carbonate refuse to dissolve. The idea seems to be that a little longer development will make up for the solution being "weaker." That, however, is only half the trouble. If some of the ingredients have dissolved and some have not, the propor-



THE DAM

VICTOR DARNELL

tions will be all wrong; you may get such rapid action as to produce chemical fog, or you may find the developer so restrained as to be useless. The varying results are too often put down as errors in exposure.

You should not think that the faster the water flows through a washer, the faster are the plates being freed of hypo. As a matter of fact, a gentle stream is much more quick and effective in its results than is a miniature Niagara. Only a small part of the hypo you wish removed is on the surface of the negative, the greater part is deep down in the film itself. A quick flow of water will pass over the surface of the film, and hardly penetrate at all, whereas a slow stream will penetrate, soak up the hypo, and carry it off.

You should not put a plate straight from the developer into the fixing-bath without an intermediate rinse in clear water. There may be no immediately-observable bad effects; but negatives so treated are very apt to develop spots after a year or two, presumably because some chemical compound is formed which prevents perfect fixation, or refuses to be washed out in the ordinary way. In addition, it is a practice which causes the fixing-bath to become thick, discolored, and useless after the first day's work.

You should not allow spilled solutions to dry

up on floor or bench. It is not only that they will rot the wood, but almost every solution used in photography will, if evaporated in this way, deposit tiny crystals of its solid contents; these crystals are remarkably light, and will soon be stirred up and float in the air of the darkroom until they find a convenient resting-place, as often as not, on a sensitive plate, with the result of mysterious spots. For the same reason, never leave a spoiled print or negative saturated with solution to dry in the darkroom; either wash it free of chemicals or else put it outside at once.

Never forget that because a dish "looks" clean, it is not necessarily chemically clean. Most solutions, hypo in particular, penetrate into the pores of their containers, even if of glazed porcelain or enamel. No amount of ordinary washing can remove them, and should any different solution be used in the dish, it is highly probable that it will be contaminated. One dish, one solution, is the only safe rule.

You should never forget that a photographic plate is sensitive to many influences besides that of light. Friction, electricity, heat, and chemical fumes—all have effects upon it. Therefore, it is unwise to handle it more than absolutely necessary, and there is no doubt that the best way to keep plates is in their original

packings until the moment they are wanted in the slides (plateholders).

You should never leave a color-filter in strong light any longer than is necessary. Some are apt to fade, and you will find that they have lost their virtues as color-correctors and have an uncertain effect on exposure. Lenses also are best kept in the dark, with a cap at each end as protection from the air. If left about long in an impure atmosphere, even the best of lenses will become discolored, which, of course, retards their speed very much.

Never blame any maker's materials for not giving good results, if you do not use the solutions recommended for them. It is true that some developers, for instance, are suitable for almost any plate; but you do find some makes of

material which are greatly influenced by even small variations in the composition of solutions, and will give their best effect when used only with a specially compounded mixture. This is especially true of papers of the slow bromide and gaslight types, which may account in part for the poor results so often obtained on such paper. After all, it is only fair to the makers that you should follow their instructions.

Never forget that in making photographs you are simply utilizing natural laws. There is no possibility of them failing you; if you do not obtain the best results, either your material or your manipulation has been wrong, and there is not much faulty material about, in these days, unless it has been kept badly since leaving the factory.—*The British Journal*.

Improving Prints by Retouching

H. R. BEZANT



PHOTOGRAPHER can generally look back and visualise scores of subjects that he has seen, which would have made beautiful pictures were it not for some uninteresting, inartistic and unavoidable detail that stood right in the way. Many subjects have been passed by as not worth a dryplate, because the photographer could not persuade his camera to use wisdom and discretion and omit all the undesirable objects that often intrude upon the composition.

Once I saw a red squirrel about twenty feet up on a limb of a tree, and the little animal lay basking in the early spring's warm sunshine. It had both eyes drowsily about four-fifths closed. I climbed up a tree, nearby, to within six feet, and, sure enough—as it happens nine-hundred-ninety-nine times out of a thousand—an insignificant, dead stick was right in the way. I reached out, took hold to remove the obstacle, and, crack! it gave way. The sound thus produced was only slight, but enough so that the squirrel opened its round, black eyes and looked at me suspiciously. Without any more delay, it hurried away! And, while I was watching my steps down the tree, making sure of my footing on the melting ice and snow that lay in the crotches, I made one substantial resolution—to retouch! It is but once in a lifetime that the opportunity comes to get a certain picture. The opportunity may pass in less than one second, and then it is gone for all time. Had I made the picture of the squirrel at the opportune moment,

the probabilities are—except for the stick—that the picture would have been good. In considering the matter carefully, if the picture is far enough away so that the detail is not visible, it will be seen that a picture is made up of mass-tones. There will be the dark tone of the squirrel backed by a lighter tone of a mass of early spring-foliage, and here and there patches of sky, and the ugly stick. It will be observed that to eliminate the defect would be merely a matter to work over with a medium which will cover it, by matching the surrounding scenery and details of the picture. Consequently, make use of the first opportunity and do the best that you can, but that best may mean—Retouching.

Much has been said about photo-retouching, some claim one thing and some another. Of course, if a subject is lighted correctly, and if the effect of various colors is controlled correctly, and a number of other if's are conquered at the time of making the picture, there should be no need of retouching. However, no matter where one goes, somewhere, on the other side of a private door in the photo-studio, or in the advanced amateur's darkroom, there is to be found some corner where the art of photo-retouching is practised. And, so long as the handwork is not unpleasantly evident in the positive, the photographer may bring his work forward and receive full credit for it. In the face of it all, the well-established business of photo-retouching goes hand in hand with photography—at least with photo-portraiture.



THE LITTLE PHOTOGRAPH-SHOP

EMMETT L. MILLER

Apart from the business of retouching the negative, there is another form of retouching with which the photographer is generally not so familiar, and the amateur knows still less about it. As for the novice, he marvels in his ignorance of it all. This kind of retouching is practised extensively by photo-engravers and publishers, where many photographs are reproduced. I have in mind particularly two classes of workers to whom this subject will be of interest. First, those who wish to increase their skill and, second, those who are interested to know how. The work has great possibilities and can be managed easily by the average camerist. It is known as photo-retouching; but instead of being on the negative, it is done on the print. Parts of prints can be worked together into one picture; objectionable subjects can be removed easily from the picture; more desirable backgrounds may be worked in, and this can be done with detail of almost photographic quality—at least, with such detail that it would be difficult for any one to detect the result of skilful work. By careful practice, one can soon establish an individual method of using the medium. No two persons do things exactly alike; there is no fixed rule, hence remarks are only suggestions.

The equipment needed for this work depends upon the amount of money that the worker cares to invest. The air-brush, brush-rule, palette, and a number of other things which are necessary to the professional man, will not be needed by one who has only a small amount of work to do. The air-brush is a very serviceable instrument for working upon large, smooth masses and almost any art-supply dealer can give particulars with regard to the different standard makes. It is very important to have a good sable-brush. No. 3 is a good size, and it should be a round brush with the hair well packed in the ferrule so that when dipped into water, and sharply "flipped" with the finger, it will hold a point and not divide. A camel- or ox-hair brush is useless for this kind of work. A piece of glass, about four by eight inches, a tube of watercolor-lampblack, a small jar of watercolor white, a tube of watercolor, lemon-yellow or chrome-orange, a cake of magnesium carbonate, and a handful of absorbent cotton, complete the list of articles that are really necessary.

The piece of glass is used as a palette. The watercolor white should be well stirred to mix in the gum which rises to the top when it is let stand for awhile. When it is well mixed, dip out about a teaspoonful and place it on the upper left corner of the glass. Next, take some more white and place it on the middle of the glass,

and add a very, very little lampblack. It will be found that the mixture will have a bluish color which is very deceitful in photography, as blue is really not so dark to the photographic plate as it appears to the eye. A more neutral tone is desirable for photographic purposes and so, by adding to the bluish mixture of white and black a little lemon-yellow, a greenish-gray color is produced, which matches generally the tone of most photographic prints. However, by using certain developing-formule, many photographers produce photographs which have a decided brownish tone. In this case chrome-orange is better than lemon-yellow. Having mixed this white, black, and yellow, or chrome-orange, as the case may require, the worker should scoop it up and place it second in the row at the top of the glass. Then, put some more white on the center of the glass, and mix this batch a shade darker, destroying the bluish tone as before, and place this third in the row. Again mix up another batch still darker and deaden the blue, and place it fourth in the row. It is important to blend the mixtures well. Now, place fifth in the row on the upper right corner, a patch of pure lampblack. There will be—in five steps, ranging from pure white to black—a set of monochrome shades from which any desired tone can be selected. These should be let dry hard before using. With this medium it is possible to cover any part of the photographic print.

Now for the actual work: The retouching may be necessary to remove a disfiguring telephone-pole, or to take away some inartistic structure which is objectionable in the picture. Take the print to be retouched and paste it onto a cardboard-mount; then take the sable-brush and dip it into water. Apply the wet brush to the watercolor on the glass, selecting from the five the tone that will most nearly match the mass-tones of the picture, and by mixing any two, lighten or darken as needed. Cover the object to be retouched out, first, with a solid, flat, mass-tone by applying the moistened retouching-medium to the print with the brush in flat and graded tones according to the tone of the immediate adjoining part of the picture. And, second, by breaking up these flat masses with detail corresponding to that of the background, the principal object in the picture, and the surrounding scenery. After the print has been retouched carefully, a copy-negative is made and if the work has been well executed the detail in the retouching will be in the resulting print—almost photographically perfect.

Photographic prints that have been handled—especially glossy prints—and prints that have

been fixed in an acid-bath, will often have a greasy surface on which it is impossible to do retouching and keep the print flat; it will roll up. There are many remedies for this trouble; but, perhaps, the cleanest and best way is to apply to the print with a tuft of cotton some magnesium carbonate and rub it in briskly before beginning to work. It will instantly remove the cause of the trouble, and, at any time, during the work—when the retouching is dry—mag-

nesium carbonate may be applied in this way without damage to the retouching. However, remember to dust off the surplus carbonate with a tuft of clean cotton.

Of course, the beginner has no right to expect that all there is to do is to read the teachings of experience, make the attempt and succeed. Let him undertake small things first; then learn to retouch out small objects and later, he will be qualified to retouch in a truly artistic manner.

Things That Have Helped Me

WILLIAM UNDERWOOD



HAVE a very good method of making gummed stamp-size photographs which I wish to pass along for the benefit of other readers of PHOTO-ERA who may be interested.

The device used is shown in the sketch. To make it, take cardboard and make "tube" (1) about four inches in diameter and twelve inches long. Make another "tube" (2) that will fit snugly over tube (1). In center of tube (2) cut

light-weight paper. Then develop, fix, wash and dry in the usual manner. When paper is dry, gum as follows. Procure a smooth sheet of celluloid and a bottle of mucilage. Thoroughly clean the celluloid. With thin mucilage coat back of paper evenly then place the paper (mucilage-side down) against the celluloid and press the two together, but not hard enough to squeeze out any of the mucilage. Allow the mucilage to dry and then strip the paper from the celluloid.



hole for negative and fasten negative therein. A piece of paper is fastened at corners over negative to hold it in place, a hole being cut in the paper the size the photographic print is to be. Of course, photographs of fanciful design can be made by the use of a mask. Near one end of tube (1) attach printing-paper at corners. To print, slip tube (2) over tube (1) so the negative will be over the upper left-hand corner of printing paper at A. Make exposure. Then turn tube (2) to the right, turning just enough to get first exposure out of the way and make another exposure, continuing thus until the other side of the paper is reached. Then slip tube (2) down an inch and a half or so, and make another row of exposures across paper, as before. Continue till all the paper has been used. I always use

Clean the celluloid thoroughly with warm water after use. The sheet of celluloid should be larger than the size of printing-paper used. After paper is gummed, cut out photographic prints with trimming-board or shears. At least, a dozen prints can be made on one 4 x 5 sheet of printing-paper.

I found that, when I kept my printing-paper in an open drawer, while making a batch of prints, I often forgot to close the drawer when turning on the light, consequently ruining some of the paper. I overcame this, however, by fitting a piece of light wood as a cover inside of the drawer. I painted it a dull black, and hinged one end to the back of the drawer. On the other end, I fastened a small weight of lead and screwed a knob on the top. Across the front of

the inside of the drawer. I nailed a small strip of wood on a level with the hinges at the back so that the cover would lie flat. When I take a sheet from the drawer, the cover falls back so that, without closing the drawer, the paper is protected from the light.

Seashore-scenes, sunsets, etc., show up well in a photograph which is tinted to an even pink. Yellow gives a pleasing effect for some prints, as do also red and purple. Red is especially appropriate for fireside-interior scenes. To obtain these tints, I expose gaslight-paper in the usual way, develop and wash off the developer completely, then dry the prints in the darkroom without fixing. When they are dry I expose them to the sun's rays until a tint is obtained considerably deeper than that which I desire. Then I fix the print in the usual manner. I have found that such prints are as permanent as those made in the ordinary way. Another method is to use gaslight-paper and print in the sunlight. Expose until the whole image is a dark purple. Immerse it in an ordinary fixing-bath which will at once tone and fix it. The color of prints made in this way is red, purple, pink, orange, yellow, according to how long the print was exposed.

I once had a camera which would not yield good pictures except when the sun was shining brightly. I tried the following experiment and was surprised to find that the pictures made in the shade were as good as any one could wish. The plan is this. Take an ordinary subject in the sunlight and then take another in the shade using the same shutter-speed and lens-opening. Then, in developing, make the developer half strength, *i.e.* dissolve the chemicals in twice as much water as the directions call for. This will necessitate developing the film or plate twice as long. Theoretically, the results obtained would be exactly the same, but when developed in this way, the picture made in the shade will be as clear and bright as the one made in the sunlight.

I have made a good deal of money making photographic name-plates and signs with gold- or silver-letters on a black ground for merchants and others in the following manner: The name

or sign is first very carefully drawn with a lead-pencil on a sheet of white cardboard and the letters then carefully blocked-in in solid black with Indian-ink. The design is then fastened up in a good light and photographed to the size required. When the negative, which must have a dense black image with clear transparent lettering, has been made, all that has to be done is to apply a little gold- or silver-paint over the letters on the film-side and attach a cardboard over the back. Viewed from the glass-side, the lettering is the right way round and shows up in gold- or silver-letters on the black ground caused by the photographic image of the white paper. By making a good sample and calling upon merchants and others in cities and towns one will be surprised at the number of orders he will receive and the amount of money he can make producing such name-plates and signs. I had an agent take orders for me for more than two years for signs sizes 5 x 7 and 8 x 10. I charged \$1 each for 5 x 7, and \$1.50 for 8 x 10. I was kept pretty busy making them.

I was once using a particularly fine whole-plate ($6\frac{1}{2}$ x $8\frac{1}{2}$ inches) anastigmat lens of the type which allows one of its combinations to be employed by itself. When I wished to use the back lens, I found it immovably fast in the mount. I tried all the devices which I knew for dealing with such things; but all were without avail and, after taking the skin off my hands, in futile efforts, I gave up in despair. Presently, a friend appeared whose professional pursuits have rendered him an adept at extractions—generally of a painful kind. I entrusted the lens to him and, apparently without any effort, he did what I wished. The whole secret of unscrewing a thing of that sort which was stuck fast, he explained, was to press it in at the same time as the attempt to turn it was made. It seemed to be too simple to be true; but a few days afterward I was with a photographer to whom precisely the same thing happened. Taking the lens from him, I pressed towards the diaphragm and then, trying to turn it, I found that it yielded at once.





CHRISTMAS-SNOW

BERTRAN F. HAWLEY

Louis Arthur Ducos du Hauron

In Memoriam

DR. CARL FORCH



ALTHOUGH Eder in his "History of Photography" points out expressly that the foundations of the theory of color-photography were laid entirely by a single person, namely, the Frenchman, Louis Arthur Ducos du Hauron, who died recently at the patriarchal age of eighty-three years, nevertheless the name of this extremely meritorious investigator is but little known in outside circles. The greater part of the various color-processes are always known under the names of other men, and yet Ducos du Hauron, over whose work an unlucky star seemed to shine from the beginning, was the first to mention this particular process. Only one year afterward, no less a person than the great Maxwell took hold of the problem of color-photography, and as one may readily suppose, without knowing anything of his investigations, the twenty-five-year-old Ducos du Hauron, on the 14th of July, 1862, sent to his friend L. Lélut, of the French Academy of Sciences, a treatise with the request to lay it before the Academy. This treatise, in its fundamental features, contained the additive process for producing in colors photographs, projections and

individual views—in short, the whole process as it was brought into practice in the nineties of the last century by Ives and Miehle with the aid of the then recently developed photochemistry. Even the half-pervious mirror was not omitted, by means of which two diapositives placed together at an angle of ninety degrees, could be examined in the viewing-apparatus. That the idea of colored pictures viewed simultaneously with stereoscopic effect was also mentioned, shows that Ducos du Hauron allowed nothing to pass without observation in order to follow up the problem to its last offshoot. He was not satisfied, however, with the one solution, but also mentioned (and here he stands without a forerunner) color-photography by means of a screen, such as Joly and Lumière later constructed. Lélut gave the treatise to one of his colleagues outside the circle of the Academy, who rejected it with absolute lack of comprehension. Who it was that gave this unfavorable decision we cannot know to-day. In his valuable book, "La Triplée photographique des Couleurs et l'Imprimerie," in 1897, Ducos du Hauron himself speaks of an anonymous colleague. It said that the deductions were not

sufficiently strong, the conclusions were altogether too audacious—"hasardée" it was called—its practicability appeared doubtful! That upon this death-sentence of the expert Lélut advised his young friend to withdraw the treatise, cannot be wondered at. Another series of works, in the year 1869, in which Ducos du Hauron treated subtractive color-photography, and in which he came into competition with Ch. Cros, was also unable to obtain the attention it deserved in wider circles. When he had an opportunity to exhibit a few simple proofs to the French Photographic Society, the color-sensitive plates were lacking, without which color-photography could not possess a living existence.

Ducos du Hauron labored tirelessly with his brother Alcide in the further development of color-photography, and in 1878 he was able to say that every photographic process could be utilized in three-color printing; but the resounding success that others shared so richly, and the loud acknowledgment of publicity, never reached the despairing man in the distant country town of Algiers. In order to spare him the bitterest pangs of poverty in the evening of life, the French Government granted him a niggardly pension of twelve hundred francs a year, and the Vienna Photographic Society in the year 1904 raised for him an honorary gift in the interested circles of technical photomechanical printing.

Still less attention than the color-photographic work of Ducos du Hauron received, was given to another proposition of his—made in the year 1864—by which he stands at the head of the development of the cinematograph. He received at that time a French patent for a photographic camera for producing consecutive pictures. This apparatus, which presumably could not have been completed, was to have had the following arrangement: There were, side by side, two sets of sixteen similar lenses, each set joined in four horizontal rows. On the light-sensitive plate, therefore, there were thirty-two fields of exposure. The exposure, made by means of a cloth-roll, begins in the first set in the upper row, passing to and fro to the inner field of the lowest row; from here it springs to the adjoining field of the second set and ends in the upper inner row again. To be sure the pictures would have parallax displacement to a noticeable degree: at all events the proposition was very similar to that of Muybridge, who produced the first motion-pictures. In this Ducos du Hauron had just as little success, which was also denied to his countryman Dumont, who in 1861 tried to make pictures with a single lens on plates arranged consecutively on a band and changed rapidly. Here, also, it must be conceded that he was the pacemaker of a technique that has now become very important.

Photographische Industrie.

Photographic Greeting-Cards

JOSEPH COBURN SMITH



NE of the chief reasons why photography holds such a charm for us amateurs, is that there are so many different phases of the subject, that the hobby never becomes monotonous. One delightful phase is the making of personal greeting-cards. These cards, representing, as they do, your own personal thought and effort are likely to be more highly prized by your friends than the ordinary commercial product. However, as they will be held up as examples of your artistry, they should be done well or not at all. Although it is not an extremely difficult feat to make tasteful little cards, the task is really not so simple as it would seem at first glance; for there are innumerable small and unforeseen difficulties which arise and make an astonishing amount of trouble before the final result is obtained. Probably, the best

way to help anyone who may wish to try to make this type of card, would be to describe how I made some of my own and to give an idea of the difficulties that may be expected, also some data concerning exposure and the like which may help others in a desire to attempt similar work. For this purpose, I selected four cards as examples.

Let us first look at the Easter-card. The first step was to think out the design pretty clearly and see that it conformed with the rules of composition, for if the design is poorly composed the observer is unconsciously irritated by it just as in any other unsuccessful picture. Then I found an old mount on which to do the lettering. A great deal of time was spent, by the way, in looking over magazine-advertisements before finding a type of lettering which was slender and graceful, and harmonized with



EASTER-GREETINGS

JOSEPH COBURN SMITH

the flowers. The letters were first drawn lightly with a pencil and then filled in with Indian-ink. The capitals were painted with white ink. Then I laid the card on a table, in front of a window through which the afternoon sun was shining, and arranged the daffodils on it. This was something of a task, as they would not seem to look right until I discovered that there were too many leaves. Also, the lower flower persisted in rolling over on its side and the leaves would not stay in place. However, at last I got a sufficiently satisfactory arrangement all ready to photograph, but here new difficulties arose. My camera was a Graflex and too heavy to hold out in front of me directly over the center of the card and, at the same time, focus and operate the shutter. Finally, I used a tripod screwed in the side socket and, with the legs braced against a chair, a bureau and the wall, the camera was steady enough to yield a picture. Then came the question of exposure. I had had no experience in a case like this, and my exposure-

calculator was of no help, here. Then, too, the yellow flowers called for a color-screen, which further complicated matters. I concluded to make a trial-exposure, develop it right away, see how much it was under- or over-timed and then expose the next plate correctly. To my surprise, the first exposure turned out to be about right. Data: 3 P.M.; Wratten Panchromatic plate; K3 screen; 1/10 second at F/8.

The Yuletide-card was built around the candlestick. Knowing that candles were supposed to be associated with Christmas, I looked up the matter and found that the burning of the Yule-Candle is one of the old Christmas-customs in England. Accordingly, I used the words "Cheerful Yuletide" instead of "Merry Christmas," and did the lettering in the black-letter style in order to carry out the old English idea. These points may seem to be mere trifles; but we must remember that Michelangelo said, "Trifles make up perfection, but perfection is no trifle." The quaint candle with all its drippings did not



Merry Christmas
from
Joseph Coburn Smith



"MERRY CHRISTMAS!"

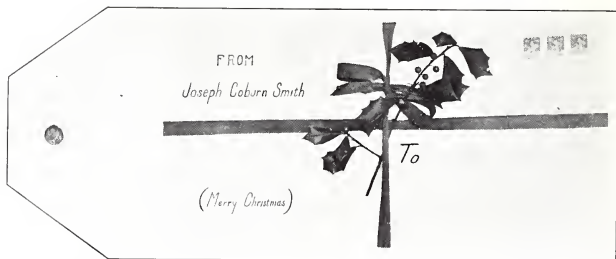
JOSEPH COBURN SMITH

happen just in that way; but was the result of burning it carefully upside down until the top was shaped right and then applying melted paraffine with a spoon, in such a way that it would run down the side and make the picturesque effect. In order to make the holly look like holly, it was necessary to snip off all except a very few of the leaves. Also, there were two kinds of holly, and the kind having the larger, glossier leaves with less points on them photographed better.

The exposure was made with the aid of two 100 watt Mazda lamps. One of these was intended for use with a stereopticon and the light came from a very small source; consequently it threw a sharp shadow. As may be observed,

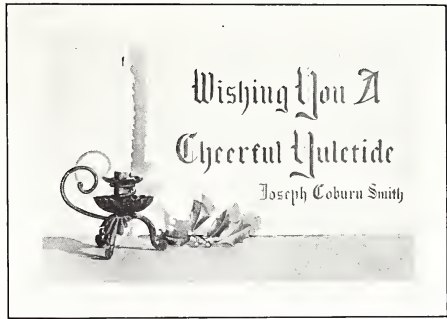
this was used on the left. The other lamp, which was frosted, I placed far enough over to the right so that it would not cast a shadow on the background, but would brighten up the right side of the candle. The exposure, which happened to be about right, was seventy seconds, with the lens stopped down to F/16. A panchromatic plate was the only kind I had on hand; but any other would have been just as good, since the subject itself was almost all in monochrome. It was developed in a tank, letting the action continue longer than usual in order to get more contrast.

The next card, in the shape of a Christmas-package, was used as a tag on gifts. I first thought of using a regular package done up in



CHRISTMAS-LABEL

JOSEPH COBURN SMITH



A CHEERFUL YULETIDE

JOSEPH COBURN SMITH

tissue-paper; but that was hard to write on in ink, so I took a white box, wrote on it, tied it up with ribbon, stuck in a sprig of holly and photographed it. The exposure was made with the same two lamps, only this time they were held close to the camera in order to prevent any obvious shadows. I gave fifty seconds; but a little more would have been better. Some of the finished tags I tinted with red and green, which made them more attractive.

The other card was made in about the same way as the Yuletide-card. The lettering was done on a sheet of white paper which formed the background and the base. The placing of the packages took a great deal of care in order that the arrangement might look natural and, at the same time, compose well with the rest of the design. For the lighting, I held the lamps fairly near the camera, but kept them moving around all the time so that the packages would be outlined by vague soft shadows. The exposure was fifty-five seconds at F/16.

All these cards were finished up in the same way. For masks, strips of black paper were pasted on the backs of the plates. The printing was done on double-weight Velox. In order to prevent them from curling, I swabbed the backs with a solution made up of $\frac{1}{4}$ ounce of ordinary cooking-gelatine and fifteen grains of alum dissolved in five ounces of boiling water.

I hope that this little article may encourage someone to make some personal greetings-cards, since the pleasure given to others, as well as the satisfaction gained by yourself, makes it well worth the pleasant effort required. Besides this, similar cards could be made to order for other people and so would be a source of profit as well as pleasure. Also, place-cards of this type would find a ready sale in gift-shops. In fact, once one gets to thinking along this line, the subject broadens out and innumerable suggestions come to mind which make one wish for more and more time to spend on this interesting phase of photography.



Heard at the Camera-Club

A Story-Article of Camera-Kinks

FREDERICK C. DAVIS



I JOURNEYED to the Camera-Club, the other evening. Despite the fact that I had many things to do, I journeyed. The Kink-Meetings I enjoyed especially, for at such gatherings all rules and procedure were dispensed with, and the members settled down in cushioned chairs and told one another of the ingenious things they had done. Each was required to bring a photograph of the accomplish-

and by holding his breath also, there is no danger of a blurred picture. Now, if you hold a camera in one hand and a flash-lamp in the other, the only way to trip the shutter is with your ear, I suppose. But he made a small wire-loop, fastened it to the hole in his shutter-trigger, and now when he holds the camera he sticks his thumb through the loop, and when he wants the shutter opened and shut, all he has to do is to move his thumb. How's that?" A murmur of approval



WASHING-CLIP

F. C. DAVIS

ment, if it were possible or practicable to photograph it. In this way everyone benefited, and I did not wish to be one that missed such interesting conversation.

When I arrived, everyone was there. They all had gathered up chairs in a circle, and eager to hear and to grasp every word, I hastily sat with them and listened to them talk.

"I have a friend," one member was saying, "who makes all sorts of flashlight-photographs; but he never uses a tripod. He says that they are too much bother, too unwieldy, that they can't be used everywhere, and that if he's making portraits, the adjustment of it wearies the subject. Some of that is very true. He holds the camera in his hand when the flash goes off,

went around. "Picture?" I asked. He handed one over. "Next!" somebody said.

Then another member began to talk. "I make quite a few enlargements, and I've always had trouble in washing them until I hit upon the plan of making a little device out of a cork. The cork from a wine-bottle is best; this is split down the center, and then two other pieces cut out and a rubber-band snapped around it. This makes a clip. Maybe the picture will make things plainer." He handed me a photograph. "I fill the bath-tub as full as it will hold, then snap one of those cork-clips on each of two corners of each enlargement. This lets the enlargement stand in the water vertically, and the water washes the paper completely. A very



LOOP TO TRIP SHUTTER

F. C. DAVIS

great number of enlargements can be washed at one time in this way, and they all are washed well."

We all thought this was pretty good. Then the Genius spoke up. The Genius was an individual who never submitted a kink himself, but always took it upon himself to improve or to add to what others had suggested. "Where," he asked, "are you going to get the wine-bottle cork? Answer me that!" No one answered him. Instead, the third member spoke.

"That picture George just gave you has got a little idea of mine wrapped up in it. Notice that the background is dead-black. I like dead-black backgrounds when lightly tinted objects are to be copied. That background was a ferrotype-plate. All that has to be done is place the plate at such an angle so that it doesn't throw reflections into the camera or against the lens, and you have a perfectly black background."

"Speaking of ferrotype plates," remarked another member, "I was up a stump once. I was making some prints for a magazine, and you know that prints for halftone reproduction should be made on glossy paper. It isn't absolutely necessary; but a good many editors won't take any other kind. Well; I was all ready to make the prints, developer fixed, and everything else, when I discovered that I had no glossy paper. Now,

Mr. Genius, don't say I shined up some dull paper with shoe polish, because I didn't. But I went ahead and made the prints on velvet paper, or 'studio-finish,' as some of you know it by. Then after the prints were all washed, I placed them out to dry. I let them dry to just a certain point. There is a time when prints are neither wet nor dry; they're just sticky and tacky. I let the prints dry until they were about like that, then I got out my squeegee and rolled each face down on a ferrotype-plate. I rubbed them like the mischief, and then I let them dry. When they were as dry as prohibition, I stripped them off, and, lo and behold! they were just as glossy as any glossy print ever was. But you have to press them against the ferro-plate VERY tightly. That kink saved me lots of time and money at different times." "Picture?" I asked. "Now, how in earth do you expect me to take a picture of *that*?" I was subdued. Another member started to speak, and I hid my embarrassment under his speech.

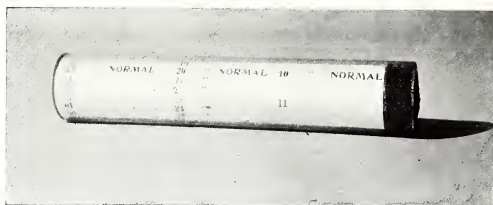
"I was up against it once, too. I was making prints late at night, and I had several hundred of them. If I had tried to wash them by passing them from one tray of water to another, I guess I'd been doing it yet. So I evolved an idea, too. I put all the prints in a bucket, and turned the faucet on, full force. That was all right for a

time; but pretty soon a print or so would slip over the edge and cover up the drain-hole. In a few minutes the water would have run over the edge of the sink and all over the floor. That meant death at friend wife's hands, and yet I couldn't waste several hours washing them in trays. So I dug up a piece of old screen from the cellar —"

"Get anything else while you were down there?" asked the Genius, impertinently.

"Shut up! I got the piece of screen and cut it so that it was about six inches wide and long enough to go all the way around the bucket. I fastened it there so that about three inches of the screen stuck up above the rim of the bucket—I used a piece of wire around the bucket to hold it there. Then, you see, the water could run

I've got a roll of film to develop, I'm up against it for a time. A tank helps me out some, but not enough. So I hit upon the plan of obtaining another can the same diameter and size of the one in which the developing is done. Then, when the spool with the apron and film on it is taken from the developer, I wash the film thoroughly without unrolling the apron, and then I put the whole spool and apron and film into the second can which is filled with hypo-solution. By the way, I found out that by adding a pinch of powdered alum and a spoonful of vinegar to the hypo that all danger of frilling and reticulation and such things are taken away altogether. I've had many good films ruined by such hot-weather troubles. But to come back to the hypo-can. I leave the film in the hypo for about



TEMPERATURE-TABLE IN TUBE

FREDERICK C. DAVIS

out freely, but no print could get over the edge and clog up the drain-hole and flood the kitchen. So I undressed while the prints were washing, and by the time I was ready for my forty winks, the prints were washed. You will find one of these bucket-print-washers a big help. If you let the water run into the bucket forcefully, the prints will be washed thoroughly, and they won't stick together or anything like that."

"Well," said the Genius loftily, "whenever I have several hundred prints to wash, I dump them all into the electric washing-machine!"

They all threatened to murder him at that.

"Do you use soap?"

"Hang 'em up on the line with clothespins when you get through?"

The mob-spirit was quieted finally, while I told them in gentle tones that it wasn't such a *very* bad idea, after all.

"William, over there, talking about doing something else while his prints were washing, put me in mind of something I did myself," went on another budding genius. "After I get home from work, I have lots of things to do, and when

twenty minutes, and then I take it out and wash it thoroughly. I use a method something like William's when washing his prints. I hook a safety-pin in the holes of each of my film-drying clips, and then fasten one clip each to the things on the side of the bucket that the handle is fastened to. Then the bucket is filled with water and one end of the strip of film put in each clip. In about a half hour or an hour in running water, the film is washed completely. The reason that both ends of the film were fastened is that if they were loose, like as not, the edge of the film would dig some of the emulsion off of other places if it ever rubbed against them. But there I go again. When you use a separate hypo-can, as I was saying, you must be sure, right after the spool and apron are taken from the hypo, to wash them each and let them soak for a while in scalding water to be sure all the hypo is washed out. It wouldn't do to have any hypo get into the next developer. But if you wash the spool and apron well enough, it's the best way on earth to finish a film and do something else, such as printing, mounting or enlarging, at the same time."

"Well," said the Genius, doggedly, "you might use the developer-can for the whole business if you wash it out thoroughly, too."

No one, however, seemed to take to the suggestion, although it was workable and had merit. Maybe it was because the Genius gave it.

"Talking about using a tank," said the next kinker, "reminds me of something that I pulled off. Once I laid the cover of my transferring-box onto a puddle of developer, and the time- and temperature-table was stained so that it was not readable. There was another table in the manual that came with the tank, and so I cut it out and pasted that on instead. A little later, I did the same foolish trick. There was still another table in the booklet that came with my camera, so I cut it out. But I wasn't going to risk ruining that one and being compelled to send to New York for another instruction-book and spoil several films in the meantime. So I got an old paper-developer tube—the tube was glass, of course, but the developer was for paper, I meant to say—I got a tube, washed it out, dried it, and then rolled up the time- and temperature-table and slipped it in the tube and put in the cork. I keep this in the transferring-box. If the tube ever gets dirty, it is easily cleaned, and there is not one chance in several hundred of the tube breaking. I might use those systems that Davis over there used to write about—subtract the temperature from 85 degrees and that gives you the correct time to develop—but when I have a particularly valuable roll of film, I like to have printed evidence that I am developing the right length of time, and not trust to my memory. It's a tricky thing, sometimes. You'll find that little tube, when it's finished, will look fine, and it is mighty handy, too. All you have to do is turn the tube until you see the right temperature. "Yes, Fred," anticipating my request, "here's a picture of it. You're welcome."

The Genius this time wisely kept his peace, and let another member tell of his kink.

"I have a lot of trouble with bumps under the print when I am mounting it," he said. "Of course, I try very hard to keep them off the back of the print when I apply the paste, but some get there, anyway. They are never visible until the photograph has been laid on the mount, and then there's no taking up the print again, because even the poorest paste sticks quickly on account of the porous nature of the mount. Well, whenever I see a bump under the photograph, I take the rounded end of the cap of my fountain-pen, and rub the mound of lumpy paste very gently. In this way the lump is broken up and is distributed evenly under the print. Most of the lumps can be eliminated in



DARKROOM-LIGHT

F. C. DAVIS

this way. Once in a while a lump of hard, flinty substance gets under the print, and then—of course—rubbing too much will break the emulsion of the print and spoil it. But if you rub gently and firmly, you may push the hard lump down into the mound, and the mound in the print will not be nearly so noticeable as before. This has saved me lots of trouble, and money in mounts and prints, besides."

"I know another way to avoid lumps, like that," said the Genius softly.

"What's that?" asked the lump-rubber.

"Use dry-mounting tissue!"

He was almost annihilated, that time. But after a while, the boys sank back into their chairs and chose to ignore him.

"Next!" I called.

"Safelights cost money," said somebody, "and they break, too. Recently I made myself several dozen safelights for a few cents; enough to last me the rest of my life. There are certain dyes which are photographically safe, and which are used in different ways in photography. I obtained a small quantity of this red dye and made a solution of it. Then I hunted up all



RETOUCHING-LIGHT

FREDERICK C. DAVIS

the spoiled plates I had and let each soak for a little while in the solution. When they came out, they were perfect safelights. In this way you can make yellow, orange, or any colored safelights at a very low cost. The dye can be obtained from manufacturing photo-chemists. They'll quote you a price on a very small quantity if you ask them to."

"Another way to do that," said the Genius stealthily, "is to get a piece of orange or ruby fabric and paste a piece onto a plate or sheet of plain glass. You can get about two dozen from a yard of goods, depending on the size of the plates used."

This was a fair suggestion, so he was left unmolested.

"I made a safelight," said another fellow, "that I use all the time. I use it when I make bromide-enlargements. I never could work in that deep-red light, so I obtained an orange globe and fastened a piece of cardboard onto the globe, as in this picture. Here, Davis! This allows the orange light to fall on the walls; but the table and trays on which you work are in shadow. The light you work by comes reflected from the walls, and is entirely safe. It gives more light to work by. I use it all the time. The cardboard is fastened there by means of a wire of small diameter. Thread might break from the heat."

"Instead of the cardboard," said the Genius, encouraged because of no attack at his former suggestion, "you might use a piece of ruby glass, and it don't have to be round either."

"You're getting better, Genius," said someone.

"And still another way," he went on enthusiastically, "is to dip the bottom of the globe in the red dye that somebody was talking about a minute ago."

"T won't stick!"

"Put some glue in it. Or some gum arabic, or something like that."

The fellows refused to comment on this. Perhaps they were jealous of the Genius' uncanny power of getting-around-it?

"Well," spoke up somebody else, "speaking of safelights, I use an electric torch in my dark-room all the time. It's just one of the tubular flashlights. I took a piece of this red, waxed tissue-paper that the pyro is wrapped in in the tank-powders, and put this over the lens of the torch. The light given out is a deep red, and is safe enough for developing-out paper, even if thrown directly on it. But with bromide-paper and plates, it shouldn't be thrown directly on them. It is all right to use it in the room, though, because only the light reflected from it strikes the sensitive surface, and that is safe enough."

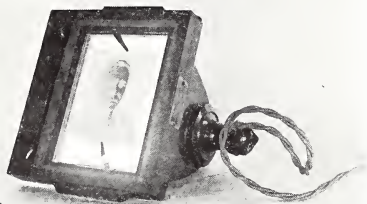
"You might dip the little globe or the lens in the red dye," said the Genius.

"You're going to die!" somebody hissed.

"When the boys over there were talking about washing prints," said another camera-lover, "I thought to tell you of something I've been doing, and since the Genius has got that cute remark about washing prints in a washing-machine out of his system, I'll go on and tell you. If he says anything else, kill him! But as I was saying, I do something else when I wash my prints. I

have one of these Ingento Plate-washers, which is almost the same as any other. It is merely a tin-box with vertical grooves on each side to hold the plates, and a funnel to let the water come in and a hole to let it go out on the other side. I use this all the time when I wash my plates, but I use it also when I wash my prints. All my prints are made on double-weight paper, and this makes them stiff enough to stand upright without toppling over. Also, the paper and the plates are the same size, of course. Well, I place two prints back to back, and place

just discovered that it is about the most versatile thing I've ever run across. I use the easel for holding papers and things I copy, and also I use the white paper on the easel as a background. But that's only a little thing. I removed the legs and runners from the parabolic reflector, and removed the bellows also. Then I found a box that the reflector would fit into. I cut a slit down one side so that the lamp-socket wouldn't keep it from going in. Then I got an Auto-Mask printing-frame that I use, and most of you do, too; and placed it over the top. The



PRINTER FROM ENLARGER

FREDERICK C. DAVIS

these two in one groove in the washer, just as if it were a plate. I do this until all the prints are in the washer, then I place it under the faucet, turn on the water, and within half an hour, the prints are washed as well as they ever could be. You may place only one print in each groove if you wish, but they are porous, and it is not harmful at all to place two in each groove, provided they are back to back. That saves me the cost of a washer for my prints, and that's what I call the all-highest aim, huh?" Then, quickly, "Kill that guy, if he says anything about that!"

The Genius said something, but not about that matter. He looked at me and said, "Davis, you've been here collecting prints and data without saying a word. Why, even *I've* said something! What have you got to say to redeem yourself?"

"Well," I began. "listen and you shall hear. You all, or most of you, have one of those Kodak Enlarging-Outfits, I know. I have one, and I've

result was as good a printer as you would want. I use it all the time. Let me say, too, that the switch in the lamp-base is excellent for timing prints with, and also, let me add, that I listen to an alarm-clock to time my prints by—four ticks to a second—count the ticks in fours. But to come back to the enlarger. I have retouching to do every once in a while, and then I like to have the same light to retouch by as I have to print by. So I remove the reflector from its box, and lay the thing down on my desk. It will tilt to just about the right angle for easy retouching. The clips which hold the two glasses together in the slide, will hold the plate of film tightly, or if the film is too small for this, a small strip of cardboard pasted on the bottom of glass will serve as a support for the plate. This light is absolutely uniform, and it is a great advantage to have the same light to retouch by as to print by. But that isn't all, either. When I change plates or fill plateholders, I like lots of light, so I

take the reflector into the darkroom, substitute a piece or two of ruby glass for the flashed opal diffusing-glass that goes with the enlarger, and it makes the best safelight yet. You can have an orange-glass in the place of the opal glass, and a ruby glass in place of the plain ones in the slide. Use the orange one until you are ready to open the box of plates, then slide in the red one, and everything is fine. No; I'm not through yet. I use the reflector to throw light on small objects I make photographs of; something like the photographs of the cork and tube that I have here. When I'm making copies, I either use the light that way to give an even, steady illumination, or I put the enlarger back together again, which isn't much trouble, and use it to throw a spot of light over the thing to be copied. This intensi-

fies and concentrates the light. I've found this very helpful. So there's about seven more ways to use something that was bought for an entirely different use. Think that's all right?"

Everybody thought so. As for the Genius, he arose haughtily and said:

"Well, I've got one of those rinktums too, and I've fitted mine with a nitro globe and a lantern-slide-carrier, so that on rainy nights I amuse the kids and myself and my wife with colored lantern-slides. Hum!"

We let him escape unharmed, and each wended his way home. With such an array of "ingenious" things, we should be able to combat the high cost of photographing successfully. I look forward expectantly to the next Kink-Meeting. Long may they live!

The London Salon of Photography 1920



HEAVENS! how very artistic these photographers are, and how extremely unlike artists! For the first characteristic of an artist who is worth his salt is the capacity for recognising the essential quality of a medium, and of this fundamental characteristic there is not a trace in the London Salon of Photography. The photographers seem united in a common conspiracy to disguise the essential nature of the camera, and to rob it of its marvelous powers of clear, direct and accurate representation. Instead of allowing the camera to do its work in its own way—which it is perfectly capable of doing—they set out to educate it, to teach it to see nature with the eyes of Carrière, or the eyes of Corot (in his bad period), or the eyes of some Newlyn student of Mr. Stanhope Forbes, or the eyes of Mr. Barribal. It never seems to occur to these "pictorial" photographers that we should like to have the camera's point of view on the scene which it reflects; that when we want art we go to an artist, and when we want a photograph we go to a photographer.

They seem to imagine that smeary, indistinct prints, kept in a mournful "tone" without accents, are more beautiful than clear, hard prints which employ the whole gamut of grays from black to white and register accents wherever they occur. All the photographs at the London Salon look as if they had been made in a fog. In the middle of the Gallery we rub our eyes at the array of indefinite gray patches in the center of light mounts, which, on inspection, prove absolutely useless as records and make no aesthetic appeal.

Exception must be made only in the case of

three or four of the three hundred and seventy-seven prints exhibited. Mr. Bertram Park's portrait of Ward Muir, though obviously intended as a joke—a skit on a Cubist painting of a head—conveys the impression from the other side of the room of an honest camera-statement of reality: because Mr. Park has got his effect by legitimate means. He has arranged his eccentric lighting and let the camera do the rest. Unless we mistake, he has not taken out or toned down anything.

Then, again, we may grant that the original idea of allowing the camera to make what it could out of the lower parts of a couple of motor-omnibuses—the idea which came to Mr. Ward Muir himself and appears in "London"—was distinctly a good one. But Mr. Ward Muir was not able to obtain an arrangement of his subject which would make a satisfactory decorative composition. He should try again, endeavoring to arrange a better balance between the large forms and the small ones, and he should, of course, develop and print for the greatest possible sharpness in order to make the most of the rhythms. Much the same might be said of Mr. J. P. Edwards' "The Promenade, Brooklyn Bridge," where the foreground is insignificant, and "Pymont Bridge," by K. Ishida, which is rather petty as it stands, and partakes of the prevailing foginess. Finally, there is an interesting photograph by M. Cervera of a tense moment in a bull-fight, "Corrida de toros" which, if it were clearer, would be a valuable record. But we can recall little else, that displays honesty, good sense, or aesthetic comprehension.—*The Athenæum*, London.



IN WINTER'S DRESS

W. STELCIK

Comparative Merits of Dryplates and Wetplates

THAT our dryplates not only possess advantages over the older photographic plates, but serious disadvantages, is unfortunately too true. And whoever has lived through the time of the gradual introduction of the dryplates knows that it was precisely the most skilful photographers who were the most difficult to persuade to use them. The chief objections made against dryplates were the difficulty of developing them correctly and, particularly, the still greater difficulty of strengthening or reducing the resulting negatives.

We have to-day become accustomed to practice; the greatest care in developing, so that the plate will come from the fixing-bath with proper strength and gradation, and we look upon it as a gross fault if, afterwards, the negative has to be either intensified or reduced.

That was not the case in the days of the wet-process; for then one was instructed—after a certain amount of discretionary development—to strengthen the image once or repeatedly, and

this was generally done immediately after developing. In certain cases, reducing was also done in the same way. This difference in treatment is due to the fact that the operation mentioned, when done on a wetplate, was just as easy and free of danger as the same operation is difficult on a dryplate. In handling dryplates, we have become so completely used to it that every new chemical operation is followed by a tiresome washing, and this tiresome washing results in our refusal, frequently, to risk spoiling a plate by bringing it into contact with new chemical solutions.

That the gelatine stubbornly retains all solutions, and that these are difficult, or even impossible, to wash out thoroughly, is an undeniable fact which we can keep account of only by doing every washing in a most careful manner. Generally, however, in doing this work the photographer thinks very little about its object. He thinks that his duty is done and that he has fulfilled his duty and provided for the permanence of his product when he has washed it "long."

without considering that the purpose of his work is not simply to leave the plate a long time in the water, but to remove any chemicals that may be contained in the coating. But for this purpose, long washing is unnecessary, and still less is an immense quantity of water, without which many operators think they could not manage at all.

Certainly, a complete washing can only be assured by allowing the chemicals time to diffuse out of the coating; and moreover the work can be properly done only when the already nearly sufficiently washed plate is rinsed in really pure water. But for this purpose, neither an excessively long time nor an immoderately large quantity of water is necessary. We have already pointed out, elsewhere, that one can draw a striking example from daily experience how a certain quantity of water can be well or badly used for cleansing. An ink-bottle can be cleaned without leaving a trace of ink by the skilful use of a glass of water; but in doing it unskilfully, one can use a couple of bucketfuls without attaining any measure of success.

The ordinary washing-apparatus in which the

plate is laid film-side up, and running water poured over it, is the worst possible arrangement for wasting water. Experience has shown that a plate in this position, after ten minutes, is not washed sufficiently, and during that time more than thirty quarts of water will have flown over it. In this case, as may readily be understood, the heavy salt-solutions held in the coating act in direct opposition to diffusion and, consequently, the water passes uselessly over the plate. A very much better position is to place the plate on its edge, for then the water is utilized to much better effect; and it is a further advantage to arrange the plate so that the coating will slope upwards rather than stand perpendicularly. Then, a constant change of the water will not be necessary to keep the plate always surrounded by clean water. If the plates are suspended in a tank of still water in this position in such a way that there is a space of clear water beneath them—in which the salts washed out of the coating can settle—changing of the water will not be necessary and one can fully wash a dozen or more plates with a bucketful of water in ten or fifteen minutes.—*Atelier.*

A Novel Picture-Hanger

J. J. COOK



T this season of the year when many amateur and professional photographers are making framed enlargements for the holiday season, a description of a novel picture-hanger, devised by J. J. Cook, is of interest and value. The advantage of this device is that it is inexpensive and, at the same time, so simple that anyone can understand and use it. In fact, according to its inventor, if a person should see this contrivance for the first time, he would know the purpose of the extra piece of cord, and how to adjust it so that the frame would hang in the desired position. The illustrations indicate some of the different ways in which the adjuster may be used. Directions for attaching it to different pictures or mirror-frames are as follows:

Fasten the ends of the cord to each side of the wooden frame, near the bottom, or well below the center, as shown in the above illustration. The loop-part of the cord, that goes over the nail, should always be attached near the top of the frame, but should never extend *above* the top.

The ends of the cord may be fastened with small staples or screws. In the case of heavy frames, use two or more staples on each side; on light, thin frames, drive the staple-part well in, and then bend it down, until it clinches the cord. After the ends of the latter have been fastened, bring the short cord to a position near the center of the frame, at the top, and set the staple astride of it, just above the glass, or just above the edge of the picture, at the top. Drive the staple in, until the short cord will just slip through, under the staple. If the ends of the cord have been fastened well below the center of the frame, the latter will swing clear of the wall, at the top, when hung up. Draw the short cord through, under the staple, until the frame hangs at the angle desired. Then bend the short cord sharply over the staple. If this has been done properly, it will not slip, but will hold the frame permanently in position.

If it is desired to have the staples flush with the wood-surface, make a depression in the latter, with a wood-rasp or the like. In this way,

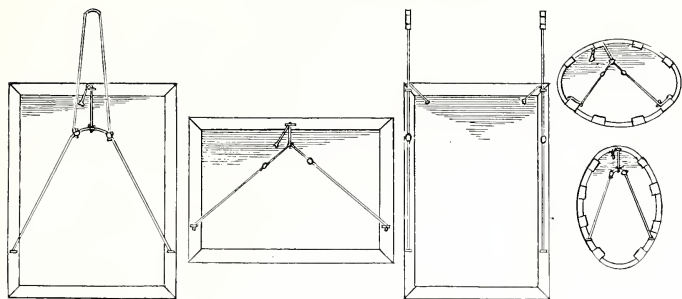


FIGURE 1

one is enabled to stack frames or framed pictures—e. g., for purposes of storing—without their being marred in the course of handling.

When it is desired to hang the frame to a picture-molding, additional cord is used, the ends being put through the openings in the cord, and well fastened, above and below the openings, so as not to come loose. When the frame has been hung, the adjuster will give the results indicated in the above cut, at the left. When two cords are used—one on each side of the frame—one adjuster at the top corner is all that is needed. When a picture-chain is used, fasten the end of the short cord in a link near the top of the frame, and attach the staple at the top corner. One adjuster only is required.

The cord furnished is sufficient to hang any frame and picture sixteen by twenty inches in dimensions. When attached to smaller frames, the ends of the cord should be cut off, to suit the length of the frame; but the top or the loop of the cord should never be allowed to extend above the top.

In connection with paper—or pasteboard—frames, or with pictures that do not require frames, small slots or round holes are cut on each side of the picture, near the bottom. The end of the wire, cotton cord or ribbon—or whatever is used for hanging the picture—is knotted, so as not to slip through. A button or a similar article may be attached to the end of such a cord, to prevent its slipping through the slot or hole.

The cord, adjuster and staples, and all the necessary appurtenances, may be used in connection with the cheapest frames.—[*Invented and patented by J. J. Cook, Monroe, La., U.S.A.*]

Good Samples Used as Bait

IN their eagerness to make a good window-display, it is a common practice for photographers to procure attractively finished specimens from trade-houses, in some instances supplying the original negatives and in others purchasing the prints ready made. If orders obtained through such specimens are sent to the same firms to be printed and finished, or if the photographer can produce work of equally good quality, there can be no objection to the practice, especially in the case of a beginner who cannot obtain a sufficient variety from his own negatives. But if this is not the case, it is likely to lead to immediate unpleasantness and ultimate disaster. The honest and sensible course is for the photographer to cater only to a class which he can satisfy by his regular work, which he will naturally strive to improve as he goes on. When his work approaches that of the trade-house, he may dispense with the help of the latter; but until that happens, he should take care that all prints delivered to customers are equal in quality to those which were displayed when the order was given. The mixture of good and indifferent work so often seen gives a bad impression, not only of the photographer's ability as an artist, but of his way of doing business. This form of deception—according to the *British Journal*—is practiced in England by a certain class of photographers. It is, however, virtually unknown in this country, because the average snapshooter is entirely satisfied with the work of the average photo-finisher which is notoriously inferior.



Messbildanstalt, Berlin



EDITORIAL



Photography as a Life-Saver

THAT photography, when practiced in the open, is not only a pleasant and instructive diversion, but a healthful, invigorating exercise, is a truth that is being constantly demonstrated. But that it serves also as a means to prolong human life, is not generally appreciated. As we passed a prominent hotel in Portland, Maine, during a recent visit to that beautiful city, we noticed a large, brilliantly lighted room on the second floor, the walls of which were crowded with small, framed photographs. Thinking that it might be the abode of a local photopictorialist, we entered and inquired at the desk about the identity of the picture-lover. Satisfied that it was not idle curiosity that prompted the interrogation, the manager explained that the room referred to was occupied permanently by a Mr. K.—an elderly gentleman, of eighty-five. Mr. K. was an ardent camerist and loved to have about him, for constant enjoyment, the results of his hobby. The rooms comprising his suite contained hundreds of framed pictures representing camera-tours he had made to the Rangeley Lakes, the White Mountains, the Berkshires, and the historic cities of Canada. The variety of these pictorial subjects formed a constant source of pleasure to him.

It seems that five years ago, Mr. K. was in such feeble health that, acting on the advice of his physician, he went to Atlantic City to see what a change of scene and climate could do for him. At the time of his departure, he was a mere skeleton, weighing only one hundred and twelve pounds. No one at the hotel expected him to return alive. After a stay of several months at the famous watering-place, Mr. K. returned to Portland. His life had been prolonged, and that was all. No; that was not all. He came back seized with a desire to procure a camera, travel, and make pictures of the scenes that pleased him. Equipped with a vest-pocket Kodak, a daylight developing-tank and a complete printing-outfit, our convert to amateur-photography was soon on his way to Quebec, in his automobile. This was five years ago. As the success of his hobby grew, his enthusiasm increased, while his anxiety about his condition became a thing of the past. He had but one thought, one interest—his hobby! He was so absorbed in his work, that he failed to notice

the rapid improvement in his health with corresponding gain in weight and general physical appearance. To-day, he is as well as he can possibly be for a man of his age, and his friends can hardly account for the favorable change. Mr. K., however, realises that it is his beloved camera to which he is indebted for restoration to health—indeed, it saved his life.



Camera-Activity vs. Waste of Materials

IN commenting on the decline of amateur-photography in Germany, and explaining the causes thereof, the *Photographische Industrie* gives some timely advice which, being based on thrift, may be applied to this country as well.

"It has been stated often enough, in these pages and elsewhere, that a serious photographic activity is not only a means of culture of the first rank, but a factor in the success of a powerful and extensive industry. Therefore, the practice of photography, as a mere pastime, has lost its original character and has acquired a real reason for being (*Daseinsberechtigung*). For this reason, he who is able to accomplish something photographically worthwhile—be it in an artistic or in a purely technical sense—commits a wrong if he allows his knowledge and skill to languish. Nor should he, who practices photography—even without a higher motive—abandon his hobby altogether. For when, in such a case, there is no absolute *raison d'être*, an important and productive market—in a critical period of the photographic industry—must not be allowed to lie entirely fallow. And, moreover, it is all wrong to be photographically idle four months in the year, for then the whole business will become doubly expensive. All sorts of difficulties may be expected—stock-solutions will have deteriorated and must be discarded; the darkroom-lamp will need to be put in order again; a new supply of printing-paper will have to be bought, because the old stock has spoiled; the orthochromatic plates have grown old and will no longer yield good results; and so on.

Therefore, one should work constantly, even if economically, and in no case permit too long pauses of inaction to occur during darkroom activities; for to ignore this advice, spells poor economy—a sheer waste of valuable materials."



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins; but in every case, prints should be protected by strong, stiff boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Outdoor-Genre Competition Closed September 30, 1920

First Prize: C. J. Marvin.

Second Prize: Rev. Leon M. Linden.

Third Prize: F. W. G. Moebus.

Honorable Mention: Charles F. Bellemere, Alec Blackie, Henry Boak, Joseph Bonanno, A. Cangemi, C. S. Carlsmith, F. H. Chant, Dr. A. H. Cordier, Warren E. Crabtree, A. J. Crossley, Martha Curry, Carlos F. DeMoya, Maude Lee Eldridge, G. W. French, Mrs. Gordon, C. T. Graves, Paul E. Guillot, Herbert J. Harper, Ralph D. Hartman, H. A. Hussey, J. Jolli-more, Leonard C. Lee, William Ludlum, Stephen Marsh, Kate Matthews, Frederico S. Morales, Alexander Murray, George S. Nallé, Samuel P. Osgood, J. V. Phelan, H. B. Rudolph, Mason H. Seabury, Kenneth D. Smith, W. Stelick, A. J. Voorhees, C. Bronson Weed, L. A. Wilson, Clyde L. Williamson, Leopold Zwarg.

Subjects for Competition—1921

"Winter-Sports." Closes January 31.

"Home-Portraits." Closes February 28.

"Copying Works of Art." Closes March 31.
(Paintings and Statuary.)

"Home-Scenes" (Interior). Closes April 30.

"Street-Scenes." Closes May 31.

"Summer-Sports." Closes June 30.

"Summer-Flowers." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print.



IDLE MOMENTS

C. J. MARVIN

FIRST PRIZE—OUTDOOR-GENRES

Effect of Temperature on Development

MANY more underdeveloped negatives are sent to us for criticism in the cold than in the hot months, remarks *Kodakery* editorially. This is doubtless due to the fact that the water used to mix the developer is colder in spring and fall and winter than in summer. Since a cold developer works more slowly than a warm one it will take longer to develop a film or plate at 55 degrees than at 65 degrees Fahrenheit.

Unless we know the temperature of the developer we are using we cannot be sure to obtain correctly developed negatives. This statement applies to both the tank- and the tray-methods of development.

Tank-development is based on the action of a developer of a given strength, for a given length of time, at a given temperature. Since in tank-development we do not examine the negatives during development, we *must* know the temperature of the developer or we cannot know when to stop development. The length of time to develop in the tank, at all temperatures between 45 and 70 degrees, F. is stated in the instructions that are furnished with every tank.

When we develop our negatives in a tray, and judge when to stop development by examining them before the darkroom-light, we cannot tell certainly when they are correctly developed unless the developer is always used at the same temperature, because a cold developer produces an image whose apparent density, when examined before the darkroom-light, is greater than the printing-density of the finished negative. On the other hand, a warm developer produces an image whose apparent density before the darkroom-light is less than its printing-density. The result is that even if we make no mistake in judging the apparent density during development, our tray-developed negatives are apt to be underdeveloped in cold weather and are equally apt to be overdeveloped in hot weather, unless we always use the developer at the same temperature.

Testing the temperature of water by dipping a finger in it is pure guess-work. A wet finger does not tell the temperature. It tells only how the water feels, and water at 65 degrees may feel warm in winter and cool in summer. The only way temperature can be determined accurately is by testing it.



"COME ON!"

REV. LEON M. LINDEN

SECOND PRIZE—OUTDOOR-GENRES

Saving Underexposed Plates

It sometimes happens that negatives which would be of considerable value are so underexposed that they are quite incapable of yielding a print, even if intensified. In such cases, remarks an English cotemporary, it is not advisable to push the development till chemical fog results, but to preserve the clearness of the shadows, and after fixing, to bleach the image with mercuric chloride, back up with black velvet, and treat as a glass-positive by copying. When this is done it is advisable to leave the plate in the mercury-solution much longer than would be necessary for intensification, as by doing so the deposit becomes much whiter. In some instances, it may be found that the image is too weak, even for backing-up, and resort must be made to a method similar to the dark ground illumination of the microscopist; that is to say, a black background is placed at some distance behind the plate and the light allowed to pass through the film. A good negative may be obtained in this way from an otherwise hopeless original.

Photographing a Stained Original

HAVING been asked to photograph a page out of a large book, so that the writing should be very distinct, but as far as possible a bad red stain should be avoided, I was led by something I had read some years back in a photographic magazine to try an experiment. The page was a leaf from a family-Bible, G. Beighton goes on to say in *The Amateur Photographer*, the paper old, yellow, and absorbent, and the stain a deep and recent one caused by the upsetting of a bottle of red ink. The

principle I used can be expressed as "taking a hair of the dog that bit me." The page was fastened up in a good light, and the lens fitted with a liquid light-filter, made by carefully cleaning two lantern-plates and attaching them with sealing-wax varnish on each side of a piece of quarter-inch wood, the wood being cut away to form a trough. In this trough was placed a mixture of four parts of water with one part of red ink. I was able to use some of the same ink that caused the stain, as the bottle was not completely emptied, but could not use it in a greater strength than that named as there was only a little left. A preliminary trial on a panchromatic plate gave me the correct exposure, and the result, although the form of the stain could still be seen, was almost all one could wish. The extemporised filter helped very much to increase the contrast between the faded ink and the yellow paper, which promised to give as much trouble as the stain itself.

Fixing-Baths for Prints

PHOTOGRAPHIC practice, says *The British Journal*, like many other things, is not exempt from fashion, to which, perhaps, more than anything else, must be ascribed the present custom of using a fixing-hardening or a fixing-clearing bath for developing-papers. For many gaslight-papers an "acid" fixing-bath is certainly necessary, but for most bromide papers it is largely and unnecessarily used—presumably as a preventive of possible blistering if the prints are afterwards sulphide-toned. But it is overlooked that, as MM. Lumière showed years ago, hypo goes much further as a fixing-agent when unmixd with the alum or acid



FISHERS—MAN AND BIRD

F. W. G. MOEBUS

THIRD PRIZE—OUTDOOR-GENRES

which is used in the compound baths. For example, the quantity of prints which a given quantity of hypo will safely fix is reduced by half by such admixture. As regards the use of a plain hypo-solution for fixing bromides, which was the regular practice in the early days of this printing-paper, it is sometimes urged that the liability to stained highlights is against it. This, we are sure, is a misconception, and on the other hand, the use of such a bath has the advantage of providing, by its progressive discoloration, a danger-signal that the bath is approaching a degree of exhaustion of its powers at which prints run the risk of imperfect fixation. There is much to be said for the latter feature; a bath which remains virtually colorless to the end of its fixing-life is by no means an unmixed advantage if permanence of the prints is a consideration.

Home-Made Dryplates

It is quite clear that many photographers do not realise the nature of the materials and processes which are used in modern plate-making, remarks an English contemporary editorially. If they did we should not be asked so frequently for a "formula" to make an emulsion to give plates of, let us say, a speed of 250 H. and D. By getting a copy of Abney's "Photography with Emulsions"—long since out of print, but obtainable occasionally second-hand—and working on the lines therein laid down, it is not very difficult to make clean-working plates with a speed of 20 or 30 H. and D., though that, in itself, requires some manipulative ability and aptitude. But when we come to emulsions with the sensitiveness of even the ordinary rapid plates now on the market, a "formula" is of no use at all. Such speed is only to be obtained by the use of specially selected gelatines, which are not obtainable at all on a small scale; or, if they were, would need elaborate experimental work to determine the details of their use; and it calls for the possession of expert knowledge

and of a fully-equipped laboratory. No doubt plates and films to-day are made on the same broad lines which were in use when the published descriptions were first written; but there must have been a host of important, though minor, changes in detail to produce the extremely rapid and perfectly manufactured product now on sale. This is shown plainly enough by the fact that, when the latest published descriptions of emulsion-making were issued, no plates made either by amateurs or by manufacturers approached those of to-day in sensitiveness. A plate of 60 or 70 H. and D., a common enough speed for the "ordinaries" of the present day, was then regarded as very rapid indeed. Those who wish to gather some idea of the nature of the problems which concern the plate-maker would do well to read Professor Findlay's Hurter and Driffield Memorial Lecture. [This Memorial Volume was reviewed at length in September, 1920, PHOTO-ERA. EDITOR.] They will, at any rate, realise what a very little distance towards success any mere "formula" could carry them.

Light and Shade in Portraiture

IN demonstrating the qualities of a system of artificial lighting, at the New England Convention, Will H. Towles, the premier portrait-photographer of Washington, D.C., and author of a successful book on light and shade, centered his talk on the rendition of character-construction in the human head and versatility in lighting. The photographer, he insisted, must first of all understand the form of the head and how best to render its interpretation with light and shade, before he can claim to be an artist. The education of the eye to see correctly the values of light and shade, he declared, was the means to this end. Multiple lighting in studio work, he said, if well and individualistically interpreted, was a legitimate and beautiful solution of the problem of character-photography.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



SKI-ERS HOMEWARD BOUND

WILL CADBY

Advanced Competition—Winter-Sports Closes January 31, 1921

ALTHOUGH most amateur photographers and many professional photographers appear to accept the unwritten law that cameras should be laid aside during the winter-months, there are many camerists that have learned of the fascination of photography in winter. That there are many attractive subjects, cannot be denied by the most apathetic of sit-by-the-fire camerists. However, among all the possible subjects, none is so attractive, so exhilarating, so really exciting as the photography of winter-sports. Readers of PHOTO-ERA MAGAZINE will recall the many excellent examples that Kenneth D. Smith has contributed within the last few years; and, by looking up these pictures in their files, camerists who have real red blood in their veins will respond to the appeal of the clear, cold air, the sparkling snow and the excitement of the sport. After all, photography in winter is some-

what akin to the bather who dreads the first plunge into water that he *thinks* is cold but subsequently discovers to be "fine." The increasing interest in winter-photography bears out my statement that it has a fascination of its own that compares in no way to picture-making at other times of the year. Obviously, warm clothing is a requisite and careful attention to the photographic equipment; but, then, these two requirements are not insurmountable; and whatever annoyance or discomfort arises will soon be forgotten in the exhilaration and excitement of winter-sport photography.

With all due respect to the painstaking worker who believes in using a tripod, plate-camera and other equipment suited to thorough workmanship, I am free to admit that in the photography of winter-sports the portable, roll-film hand-camera is the most effective outfit. Unless the worker has actually tried it, he does not know how difficult, annoying and, sometimes, positively disastrous it is to manipulate plate-

holders and slides when the thermometer is at or below zero. At such times, a tripod is just one more vexation; for with ice and snow on the ground, it is no easy matter to plant the tripod-legs firmly enough to permit the camera to be supported safely. Even with a roll-film hand-camera there are enough problems to be mastered. For example, in cold weather the film should be turned slowly and steadily to avoid generating small electric sparks which may cause weird markings on the film and might be powerful enough to ruin it. Then, too, take care of the lens! Those who wear eyeglasses know what happens when they enter a warm room after being out in the cold air. Their eyeglasses "steam up" and, until the moisture evaporates, the glasses are useless. The very same thing happens in the case of the camera-lens; and, unless careful attention is given the matter, the sensitive surfaces of the component parts of the lens may become seriously damaged. It should be remembered that the marvelous polish given high-grade anastigmat lenses makes them particularly subject to injury by sudden changes of temperature and the action of rain, snow or spray. Hence, in returning from a winter photographic expedition, do not bring the cold camera into the warm room but put it first in some part of the house—the entryway, cold closet, vestibule or shed—so that it may "thaw out" slowly and the lens be free of condensed moisture.

Within the last few years the compact, convenient vest-pocket cameras have been used largely by successful camerists. The advantage of these cameras is that they may be carried in the pocket and thus the photographer may keep his hands in his coat-pocket instead of exposed to the cold as would be the case if the camera had to be carried in the hand. However, there are certain occasions when the reflecting type of roll-film camera is best, and then the worker will do well to wear heavy, woolen gloves or mittens. Even in zero-weather, the glove or mitten may be removed from the hand long enough to set the shutter and adjust the diaphragm, without causing any physical discomfort. Those readers who have gone into the mountains in winter will agree that the exercise of tramping through snow, climbing up mountain-sides, chopping wood for the fire and other activities arouses the sluggish blood in our veins and produces a healthy circulation that invigorates and makes us relish the frosty air.

The matter of exposure in winter is a vexing problem to many photographers. The subject becomes of even greater importance when making speed-pictures of winter-sports. Unfortunately for the camerist, the human eye is not always to be depended upon to gauge the actinic value of light. Although the light upon the snow may be blinding to the eye, it does not follow that a short exposure will give a correctly exposed picture. For years the editors of PHOTO-ERA MAGAZINE have tried to impress photographers with the fact that *there are no intense blacks in nature*. The soot-and-whitewash prints of winter-scenes are failures, because in most cases the makers have failed to give sufficient exposure and thus the shadows have been underexposed and the highlights have been lacking in detail. Hence, in making pictures of winter-sports, be sure to give ample exposure even though the light to the eye may be dazzling. There are several excellent exposure-meters available to the camerist, and he will do well to obtain one.

One of the most popular winter-sports is skiing; and the picture by Will Cadby on the opposite page is well-adapted to portray the requirements of this competition. There must be the beautifully graded snow

that is not "whitewash," the shadows that are not "soot" and the natural action of the figures. Among winter-sports may be mentioned tobogganing, skating, snowshoeing, skiing, hockey, racing by men, women or horses, ice-boating, curling, fishing through the ice and certain forms of hunting. The accurate portrayal, technically and artistically, of any of these sports will receive the careful attention of the jury. We hope to receive pictures that breathe the spirit of the great out-of-doors in winter and that show the human element engaged in the enjoyment of the exciting and health-giving sports that are popular at that season of the year. This is the first competition of the kind that we have had in several years and, from the number of requests that we received to conduct such a competition, we are confident that our readers will enjoy it thoroughly.

In searching for suitable material, it should not be assumed that the camerist must go far afield. Virtually in or near every large city or town is a pond or lake—sometimes an artificial one—upon which many winter-sports may be played during the winter. I remember that, while I lived in New York City, I spent many a pleasant afternoon in Central Park watching men and women play the old-fashioned game of curling. Also, at the same place, I have watched many exciting games of hockey. Perhaps, the most interesting of all, were the Saturday afternoons and Sundays when thousands enjoyed the skating. From the beginners in one corner by themselves to the fancy skaters in another, there was material enough for hundreds of pictures that would portray the great winter-sport in its varied aspects. Within late years, it has become the custom for municipalities to erect toboggan-slides and ski-jumps on public playgrounds, and here the camerist will find a wealth of excellent subject-material. A snowball-fight between groups of children or "grown-ups" has its element of excitement and sport, and should not be overlooked by the camerist. However, with regard to ice-boating, the worker must have access to a lake or inlet of the sea that is large enough to permit the ice-boats to maneuver freely. This applies to horse-racing on the ice and to dog-races that are held in the northern parts of the United States and Canada. Motor-sleds are said to offer great sport, and I am given to understand that this year there will be an even greater interest in this new winter-sport. No matter where the reader may live, if he will portray truthfully any sport that reflects the season of the year and the winter-pastimes in his part of the world, his picture is assured of a hearty welcome from the jury. We hope to receive many original subjects, for the readers of PHOTO-ERA MAGAZINE comprise an ever-growing family of men and women whose one aim is to enjoy photography throughout the year and who realise that insofar as they make better pictures, to the same extent will their pleasure and profit increase. Throughout the year 1920, the keen interest shown by amateur and professional photographers in these competitions has been a source of deep satisfaction to the Editors. Now let us all work together to make 1921 even more satisfying and profitable to all lovers of good photography.

A. H. B.

Warning to Photo-Pictorialists

AUCTIONEER—"Ten dollars for this beautiful picture? Why, man, the frame alone is worth more than that."

Bidder—"Yes, but not with the picture in it."

Exchange.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism at request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for 2-cent stamp.* **Be sure to state on the back of every print for what contest it is intended.**

8. On account of the present high prices of paper and cardboard, competitors may send large prints mounted with narrow margins, but in every case, prints should be protected by strong, **stiff** boards, or of a kind that bends slightly without breaking. Large packages may be sent by express (prepaid).

Awards—Beginners' Competition

Closed September 30, 1920.

First Prize: Karl A. Maxwell.

Second Prize: Stanley L. Chisholm.

Honorable Mention: None awarded.

The Beginner and Christmas

WHEN I was a boy, I remember that the anticipation of Christmas was often more exciting than realization. The anticipation consisted chiefly of conjecture with regard to what gifts I would receive, and from whom. The realization often found me supplied with several jackknives, three pairs of mittens, a varied assortment of neckties, four pairs of suspenders in fancy boxes and other disappointing duplications. My relatives and friends meant well and wished to make me happy; but many times the net result was not a gift that I really wanted or needed. I mention this by way of contrast to modern methods of Christmas giving which I commend especially to the attention of the beginner in photography.

Although the factor of anticipation is one which should be considered with regard to children, I am confident that adults will appreciate a gift as much—perhaps more—if they know in advance just what it is to be. Often, the gift is the more acceptable, because the donor and recipient have come to a happy understanding and have avoided duplication and mutual disappointment. This understanding is especially important with regard to the giving of photographic equipment. Relatives and friends who are eager to make some beginner happy, photographically, at this Christmas-season should take pains to find out definitely what the beginner needs and what relative or friend is to be responsible for each item on the list.

Let us suppose that I am asked what photographic accessory I should like for a Christmas-gift and I should reply that I need *one* three-time ray-filter. Now, let us suppose that this matter is mentioned among my relatives and friends; but no concerted effort is made to determine who shall give me the ray-filter. Christmas-day arrives and I may receive two or six ray-filters! I might find myself in a similar predicament had I asked for *one* portrait-attachment, exposure-meter, fixing-box, developing-tank, enlarging-outfit, printing-machine, darkroom-lamp, stirring-rod thermometer, tray or other accessory to complete my photographic equipment. Hence, it is of importance to ascertain what is wanted or needed, and then to agree upon one person who shall assume the responsibility to obtain it. In this way, several relatives or friends can give a number of photographic accessories that will surely delight the recipient. Moreover, there should be no hesitancy about asking the beginner what he wants or needs. In this case, frankness is most commendable.

Another very satisfactory method to use, from the point of view of the beginner, is the one which employs a written list which is "posted" somewhere about the house where relatives and friends may consult it. This method has the advantage of doing away with the need to consult the beginner personally with regard to



BOATS AT BRUNSWICK

R. J. BRACKEN AND KARL A. MAXWELL

FIRST PRIZE—BEGINNERS' COMPETITION

his photographic Christmas. In one case that I know of, the would-be recipient of photographic Christmas-gifts took the time and the trouble to give the price of each item on the list and also the name of the photo-dealer who carried it in stock. To say the least, this method saved much time in shopping.

At this season, the beginner of one or two years' experience should "take stock" of his photographic equipment. By that I mean, he should consider carefully what he has to work with and any accessory that might enable him to do better work. Also, he should "take stock" of his mental photographic equipment. It should be remembered that mental training is just as important in photography as it is in other pursuits; and the beginner whose mind is well equipped is the camerist who will make a success of his camera-work. Not in several years has there been such a large number of really excellent photographic books available as at this time. These books are suited to the requirements of the beginner and will enable him to make progress. Then, too, there are the photographic magazines of the United States and foreign countries which offer the beginner timely information with regard to new processes, technical and artistic standards, exhibitions, competitions and other matters of practical value. Therefore, it will be well to remember the importance of the mental factor in photographic success when making a Christmas-gift to the beginner.

There are many ways to attain the same end—to make the beginner happy with a photographic gift that will not only please him, but will stimulate him to make better pictures. However, those methods of gift-giving that I have suggested have been tried successfully and I can vouch for their practicability and serviceability.

Readers and subscribers of PHOTO-ERA MAGAZINE know that its Editors are striving to make the magazine an incentive to better photography. In this department, which is conducted for the benefit of the

beginner in photography, the underlying purpose has been to awaken a deeper interest in camera-work and to make the beginner realise, at the very outset of his photographic career, that the more real effort he puts into his work, the greater will be the returns in health, pleasure and, maybe, pecuniary profit. It is the *successful* camerist that becomes a credit to photography and to himself. To make a success of photography requires no different procedure than to make a success of any undertaking that is really worth-while. Therefore, at this holiday-season, let us hope that the photographic gifts which the beginner will receive will create in him a vision of all that *good* photography can mean to him and to his friends. Some of my readers may be inclined to say that all this is very well but what has it to do with ordinary snapshot-photography? It has much to do with it. Let us suppose that John Paul Edwards, E. M. Pratt, George W. French, Dr. T. W. Kilmer, Dr. J. B. Parloe, Herbert B. Turner and other well-known workers had been satisfied to make merely snapshot-pictures and had been content to let their photographic career end right there. There is no standing still in photography any more than there is in any other human activity. Either we advance, or we fall behind. PHOTO-ERA MAGAZINE addresses itself to those who are eager to advance in photography and who realise with its Editors that to succeed, the amateur and professional photographer must "play the game, clean and hard."

At the Christmas-season it is well to give a moment of thought to the factors which have so much to do with the beginner's interest and pleasure in photography. However, I have no intention to make him feel that his camera-work must be treated as a serious duty. Nevertheless, the fact remains, that the more seriously the beginner considers his photographic work, the more recreation and real fun he will get out of it.

A. H. B.



BROTHER

STANLEY L. CHISHOLM

SECOND PRIZE—BEGINNERS' COMPETITION

Air-Bubbles in Tap-Water

IN cities and villages that have water-distributing systems it sometimes happens, says *Kodakery*, that the same faucet will furnish clear water during the summer-months and milky looking water at certain times in the spring and fall and winter.

By drawing a glass of this milky looking water and watching it for a few moments we will observe that the milkiness gradually disappears, the clearing-action beginning at the bottom of the glass and steadily moving upward until all the water has become clear.

When the water-pipe through which the water is carried to the faucets passes through a basement where a furnace is in operation, or through a room that is much warmer than the ground where the pipe lies outdoors, the water that is left standing in the pipe indoors becomes warmed, and in warming it expands. This expansion, added to the normal water pressure in the pipes, is often sufficient to make the presence of the air visible, by the formation of multitudes of tiny air-bubbles, when water is drawn from the tap. It is these little bubbles that make the water look milky.

Water in which air-bubbles can be seen should always be allowed to stand until all the bubbles have risen to the surface and disappeared before it is used for developing films or plates. If this is not done the

air-bubbles in the water will make it impossible for the developer to act where they become attached to the emulsion and, by delaying the action of the developer until they disappear, they will cause small disks of lesser density than their surroundings in the negatives. These disks will make dark spots on the prints.

Should any air-bubbles remain on the surface of the emulsion during the entire time of development, they would make transparent disks in the negatives and black spots on the prints.

All water absorbs air when exposed to the atmosphere, but the air in the water will cause no trouble in developing unless it is present in the form of bubbles.

To Our New Subscribers

DURING the summer and autumn several hundred new subscribers have been added to our list. Many of them may not be aware that the numbers preceding the issue with which they started their subscription are fully as interesting and valuable, and it might be well to have the files of the year 1920 complete. We should advise such subscribers to send at once for the remaining numbers before they are out of print. They will be sent, at 25 cents each, postpaid, as long as they last. We advise early action to avoid disappointment.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Washing a Few Negatives

SOME of us who have been in the workrooms of experienced photographers in the days when negatives were more rarely handled in the large numbers of the present day, may recollect having seen one of the simplest and most efficient appliances for washing out hypo which it is possible to have. This, an English contemporary goes on to say, consisted of an inclined board provided with a fillet of wood on each side and with cross-pieces joining these two fillets, so as to form spaces for the plates to be washed. The board was placed with its upper end under a tap from which a gentle and even stream of water flowed down its length, being delivered immediately to it through a pile pierced with sprinkle-holes. The device is deserving of being signalized among the many appliances which photographers of the past generation made for their use, because no more inexpensive and effective apparatus can be employed for washing negatives of fairly small size when only a few have to be dealt with at a time; if the number is over a dozen, or if the negatives exceed $4\frac{1}{4} \times 6\frac{1}{2}$ in size, the dimensions of such a washing-board become inconveniently large. Although, perhaps, the old photographers designed better than they knew, the fact remains that a washer of this kind realizes the conditions which have been determined to be necessary for the most thorough removal of salts from gelatine; that is to say, a constant delivery of clean water, and means for the complete removal of the salt-charged water which slowly escapes from the cells of the gelatine.

Squeegeeing Photo-Prints

IF any amateur wishes to make glossy prints without going to the expense of buying ferrotype-plates, he can use the windows of his room for the purpose. The glass should first be cleaned very carefully and then rubbed with a few drops of castor-oil on a dry cloth. The enameled inside of a bathtub can also be used.

Printing for the Trade

THE season which has now started promises to be a record one for the dealer, chemist, and trade-printer who specializes in developing films and plates, and supplying prints therefrom. It is lamentably true that the bulk of amateur "snapshots" are underexposed, with the inevitable result that the images are thin and weak. Gaslight-paper, with its characteristic brilliance and increased contrast, is a valuable aid to the trade-printer who makes a point of producing the best possible print from every negative. Negatives of all kinds, soft, hard, thin and dense have to be dealt with; but none of them should present any difficulty to the worker who takes care to choose the correct grade of paper to suit the negative.

We think that there is not sufficient attention given to the all-important question of choosing just the right grade of paper to suit the negative. We hold no brief for the printer who claims to produce his results by tricks in development. The development of a print should (excepting in certain circumstances) be

purely a mechanical operation of full development of all light-action.

The use of a variety of papers of different speeds necessitates certain alterations to the printing-box; but where electric light is available, the light can easily be increased or decreased. The grading and sorting for printing of a day's negatives is an important job, and should be done by an experienced person.

As regards developer, either Amidol or M. Q. can be used; but we prefer the latter. The formula we give below is particularly suitable to the trade-printer for use with plates, films and papers.

M. Q.—ALL-PURPOSES DEVELOPER

Metal (or Monomet).....	$\frac{1}{2}$ oz.
Sodium Sulphite.....	1 lb.
Hydrokinone.....	2 ozs.
Sodium Carbonate.....	1 lb.
Potassium Bromide.....	160 grains
Water to make.....	2 gallons

In making up this developer, put the water (warm) in a two-gallon jar and add about one ounce of sodium sulphite. When dissolved, add the metal and then the remainder of sodium sulphite. The other ingredients should be added in the order given.

This developer is double strength and should be used as follows:

Bromide paper, add equal part of water; films and plates, add equal part of water; gaslight-paper, use full strength.—*Rajar, Ltd.*

Focusing in Telephotography

WHEN a moderately-powered telephoto-lens is used, it will be found possible to do all the focusing necessary without the help of a focusing-magnifier; but for high-power work an eyepiece of some kind is very useful, says a writer in *The Amateur Photographer*. In order to employ it the focusing-screen must be provided with two or more spots which have had their ground-surface obliterated by cementing a microscope cover-glass to it with Canada balsam. The spots chosen should be, preferably, very near two diagonally opposite corners, and somewhere near the center of the groundglass. A cross should be made on the ground-surface with a sharply pointed pencil before cementing the cover over it. This cross will be visible on an otherwise clear spot when the operation is complete, and the magnifier being placed down upon the smooth surface of the screen the cross should be sharply focused by the means provided. When this has been done the adjustment of the magnifier should not be altered again in any way. To focus the image the magnifier can be placed over the spots in succession and the camera focused until both the pencil-cross and the object can be seen perfectly sharp at the same time.

Such an arrangement is not required with such a lens as the Telecentric or the Adon, or any other instrument that is not very high powered; but lenses of this type call for careful focusing if they are to give as fine definition as they are capable of yielding; and when the subject is poorly illuminated the focusing-magnifier, used as described, is a great help.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

It would seem that the technical work on this negative, and the resultant print, would be hard to improve, unless, perhaps, the exposure might have been lengthened enough to give a little more detail in the heavy shadows on the side of the cup. Personally, I should like to have the negative show up the design a little more clearly, whereas, it is nearly hidden by the deep shadow; but this is a matter of taste. The composition, however, might be open to a little improvement. If the present grouping is satisfactory, the effect—I think—would have been better, had the print been oblong, thus giving more room at each side. Now, the group of articles seems crowded, the edge of the glass being cut off. The camera might have had to be placed further away, but the negative could have been enlarged.

It does not seem to me, however, that the composition is altogether harmonious. The beer-mug, the vase and the wine-glass do not seem to harmonize. If the mug were to be used, either a pipe, a cigar partly smoked, or a bottle of "Milwaukee," could have been placed with good effect, in place of the vase and glass, or the mug used alone; or, perhaps, a glass-decanter of the same design as the wine-glass and vase could have been used.

GEO. REED STEVENS.

ONE of the most elementary principles of architecture is that the construction must be evident: if there is a weight, there must be a support; if there is a support, there must be a weight as its *raison d'être*. In pictures, if there is a highlight, there must be an obvious source of illumination. If there is a shadow, there must be an obvious cause of that shadow. But in this picture, whence comes the light? Take the lighter shadow at the foot of the beer-mug. The light shadow at the left is evidently cast by the handle, and the much heavier shadow is evidently cast by the body of the mug. And yet, there is a pointed shadow on the table at the foot of the mug that must have been cast by the top of the mug. Three-quarters of the mug is illuminated at the same time. What kind of a source of light illuminates a body thus? Evidently a combination of lights producing unnatural effects. False art! The picture also lacks proper spacing: the handle of the mug is too close to the edge of the paper and there is no obvious reason for chipping off the right side of the wine-glass.

E. L. C. MORSE.

WHAT is the logical reason for grouping in a picture, a beer-mug, a vase and a sherbet-glass? Although the triangular arrangement is correct, the space is crowded. The shadow on the "stein" is too heavy, and the blank, black space and horizontal line across the base of the picture are unpleasant.

But here is my quarrel: I subscribe willingly to the doctrine that a soft-focus lens should be used when it



THE PICTURE CRITICISED THIS MONTH

portrays what the eye sees. Only a myopic eye, however, would see this group as it is here depicted. The normal eye sees in a piece of cut glass, graceful pattern, and delicately reflected light from many facets. This we have, partly, in the sherbet-glass, but not in the vase. There is no reason for its presence in one and absence in the other. Only as a pleasing tone-pattern, disregarding subject-matter, is this picture a success.

BERT LEACH.

BOTH the selection and arrangement of this picture show careful consideration. There is harmony and symmetry in the setting. Note the oval composition and, within it, the rhythmical repetition of curved and pyramidal shapes. The worker has not overlooked the background, but the foreground presents an abrupt contrast to the pleasing tones of the picture and compels the eye insistently downwards. Doubtless, the photographer now regrets, as much as I do, the needless covering on the table, whose grain is so pleasingly pictured; the surface of the table would not have obscured the graceful and harmonious bases of the glassware, as much as the light-toned cloth has done. In this photograph, the maker doubtless discovered it necessary to trim off the part at the right to avoid incongruous lines, and we hesitate to criticise his bold use of the scissors. With the lighting available, the tonal results are good; but the shadows are puzzling.

Personally, I prefer simpler lighting and more natural shadows. I should like to see more of Dr. Detlefsen's work.

W. A. BURNHAM.



Multiple Pictorial Interest

AMONG the many things PHOTO-ERA has done to improve the pictorial composition in photography is to point out the bad effect of dual or treble pictorial interest—two or three pictures within the limits of one. I have profited by your advice and, doubtless many other picture-makers have done the same.

I was attending a public sale of paintings by American artists, the other day. When a pretty landscape by O'Neil was placed on the easel, by the attendant, the bids were slow in coming. I had offered ten dollars; that was my limit. The salesman coaxed me to increase my offer, but I declined. Interested to know why, he asked me what it was I objected to in the picture, and I answered that the prominent road with people walking in it, and the adjoining river containing watercraft presented two very distinct centers of interest. The salesman looked earnestly at the picture, and then said: "Well, what of it? We are offering you more for the money; two pictures in place of one, and by the same artist, too!"

JAMES A. FOX.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



On opening this number of the magazine, the reader is greeted by the engaging picture of a little girl in airy costume—appropriately named, “Fluffy Ruffles.” The attitude is gracefully playful, and the expression correspondingly felicitous. The background is a trifle “busy,” but not inappropriate, for is it not suggestive of toyland? The discriminating beholder appreciates the exquisite modeling of the head and arms, and the play of lights in the child’s dress. Originality is the keynote of this charming creation, which justly merits the distinction of prefacing the letter-press.

Photo-readers are familiar with the pictorial skill of Herbert B. Turner. The three pictures that accompany the first section of this tourist-photographer’s account of a tour in the West Indies serve as a foretaste of something more “filling” that is to appear in the succeeding issue. Data of the glimpses of St. Thomas and Dominica, pages 271–273, are contained in Mr. Turner’s readable sketch.

“The Dam,” page 275, is a revelation of the defining and atmospheric qualities of the crystal lens, which, in the hands of an intelligent practitioner, is capable of yielding results that are beautiful and true. Anything superior, in these respects, to the limpid, crystalline waters of the dam, pictured by Victor Darnell, is difficult to imagine. Data: Rock Creek Park, Washington, D.C.; June, 9 A.M.; light, clear; 5 x 7 view-camera; 9-inch Hanovia Soft-Focus lens; stop U.S. 64; ½ second; Stanley plate; metol-hydro; print on Iris A.

Departing from its custom of presenting in the December issue a picture that expresses the Christmas-spirit in a quite obvious manner, PHOTO-ERA MAGAZINE has chosen a conservative interpretation. Only a little imagination is required to picture a quiet scene inside of the little photograph-shop. Maybe the proprietor, with his family—relatives, if he be a bachelor—is passing the evening in an exemplary manner—happily, reciprocally, contentedly. He undoubtedly deserves the gifts of which he is the recipient, for he is a craftsman approved by PHOTO-ERA MAGAZINE, having done his share to make others happy. By his skill and conscientious care, he has supplied photographic prints—contacts and enlargements—that have enabled many a camera-user to make appropriate gifts at this time. A curious feature of Mr. Miller’s picture is the motley collection of faces and figures that crowd the two snow-covered evergreens between the sign and the window. Observe the excellent profile of Santa Claus, himself, carrying his Christmas-pack, surmounting the tree nearest the sign, gazing into the brilliantly lighted room. There are many other fanciful figures and faces on this same tree, among them a large toy-cat—as if it all were the work of St. Nicholas, himself. And the adjacent tree, too, teems with strange faces, the one at the top being the bust of a young girl with ribbons in her dark hair. The interested and patient beholder will find much to amuse him in this fantastic scene, which, appearing on page 277, also serves to decorate the front-cover. Data: Made at Chappaqua, N.Y., December 24, 1919; 8 P.M.; by the light from the window; 5 x 7 Empire-State camera; 8½-inch Dagor

lens; at F/6.8; 10 minutes’ exposure; Eastman Portrait-Film; pyro; contact-print on Carbon Black.

A scene similar to the foregoing, is by Bertram F. Hawley, whose home is amid the deeper snows of Canada. The one human being in this gnome-land seems fascinated by the numerous, strange snow-creatures that surround him; but the artist of the picture was engrossed by other thoughts, for he has associated the scene with the spirit of Christmas.

The interesting article by Frederick C. Davis is accompanied by several pictures to illustrate the text. Data:

Photograph of shutter-loop: light supplied by carbon arc, ten seconds; at F/45; Eastman roll-film developed in pyro in tank; print on glossy Velox; developed in M. Q.

Photograph of glass-tube: same data as for photograph of shutter-loop except that exposure was seven seconds.

Photograph of cork-clip: same data as for glass-tube: reflector used.

Photograph of darkroom-light. Same data as for glass-tube.

Photograph of printer: twenty seconds’ exposure given the Seed 30 plate at F/22 in diffused daylight; plate developed in pyro in tank; print on Azo E Hard, developed in M. Q.

Photograph of retouching-light: same data as for printer. The bulb inside the reflector was lighted for about one second to show detail in negative in print.

The lens and shutter used for all six photographs was an Ilex Anastigmat working at F/6.3 and an Ilex Acme shutter. A copying-lens was used in connection with the anastigmat in making the first four photographs, and a portrait-attachment was used when making the photographs of the printer and the retouching-light.

A winter-picture of considerable merit is by W. Stelek, page 293. The interest, here, seems to center in the hill with the homestead at the right. Here lies the human attraction; although, if separated from the rest of the view, and converted into an up-right panel, the upper left portion would constitute a complete and pleasing composition. The same might be done with the entire right section of “In Winter’s Dress.” Data: Scene at Cedar Rapids, Iowa; 3 P.M.; bright light; 5 x 7 view-camera; F/4.5 Deltar lens; stop F/8; 3-times color-screen; ½ second; Standard double coated; pyro; print on Azo Grade A Soft.

No object in the Moselle Valley, which, since the Armistice, has been occupied by American troops, has been more admired than Castle Eltz. The famous structure, according to a report published in the American daily press, September 30, 1920, was burned on the preceding day, but to what extent it was damaged, was not stated. As the walls of this composite pile are very massive, it is likely that only some of the rooms were damaged.

Tourists passing through the Moselle Valley, near the town of Moselkern on the Moselle River, a short distance southwest of Coblenz, usually remember to visit the narrow, tortuous valley of the Eltz, the latter being a little stream that empties into the Moselle.

Château Eltz stands on a rocky eminence near the little river of the same name, and is a picturesque object, as it is seen relieved against the surrounding woods. The original structure, with its high, massive walls, dates from the 12th century, and additions were made, periodically, up to the 16th century. The rooms are furnished in the styles of the different centuries, and are adorned with family-portraits, armor and weapons. The castle is still occupied by descendants of the counts of Eltz, of old; yet one, who claims a share in the property, but is denied his rights, has been living in the United States for many years, following the profession of an artist. The view of the court—eminently unique and picturesque—is from an original negative made, in 1904, by a member of the Royal Messbildanstalt (photo-surveying institute) of Berlin, on an Orthochromatic Isolar plate—an Agfa product. The enlargement, from which our halftone was made, measures 28 x 34 inches. Everyone will concede the accuracy and beauty of this remarkable photograph, which required great technical skill to produce.

Advanced Workers' Competition

IN "Idle Moments," we behold a masterful interpretation of the subject, "Outdoor-Genres." The composition conforms to the highest standard of artistic conception—simplicity—which principle PHOTO-ERA MAGAZINE has urged and encouraged. In all of the fine arts—painting, sculpture, architecture, music, poetry, drama—the highest achievements are conceived and expressed by the simplest means. Therefore, as there is nothing to detract from the one great idea, the eye or the ear can grasp and understand it the more quickly, and appreciate and enjoy it the more readily. For these reasons, the artist (creator or interpreter) needs put forth his greatest skill; his performance must stand the test of severe critics and win their approval. For my part, I cannot fail to see why Mr. Marvin's picture of a child quietly amusing itself should not merit the sincere admiration of critics—of all. The arrangement of the figure is unconventional, natural and pleasing, the lighting admirable—performing its share in the composition—and the setting quite unpretentious, to afford harmony, unity and balance in this well-ordered picture. Data: Made at San Gabriel Mission, California; January, 1919; bright light; Butcher and Son's Pressman (3¼ x 4¼) Camera; 7-inch Wollensak Verito lens; stop, F/5; Standard Ortho, Non-Hal.; K1 ray-filter; 1/60 second; enlarged on Artura Carbon Black Grade E Smooth; Anidol.

There is no question that "Come on!" will make an universal appeal by reason of its personal charm, delightful composition and wellnigh perfect workmanship. The artist, probably realizing the difficulty of arranging animals satisfactorily, chose a plan to effect a pleasing composition that could not possibly fail. And yet, every movement here is spontaneous—nothing studied or artificial. It is a picture calculated to arouse sympathy, as well as merriment, and teaches a little lesson of kindness to animals. Our compliments to the artist! Data: July 16, 1920; cloudy; 9¼-inch Wollensak Verito; stop, F/8; 1/25 second; Seed 30; A-B-C tank-development; Artura Iris C.

F. W. G. Moebus has certainly given us an unusual marine-picture, and one filled with much interesting material. The title suggests that the seagulls anticipate a gastronomic feast—unless, of course, they are forestalled by the fishermen. The artist displayed admirable judgment in planning this picture, for in spacing and balance, he could hardly have done better.

The rather meager data are lens at F/16; 1/25 second; Eastman film.

Example for Interpretation

"WINTER-SPORTS" is a subject for artistic interpretation that has always been popular in PHOTO-ERA monthly competitions. Skiing is an exhilarating winter-sport and, of our European correspondents, the Cadlys indulge it, particularly during their annual winter-visits to Switzerland. Will Cadby's snapshot of a skiing party, page 302, should stimulate our American camerists to similar efforts.

Beginners' Competition

THE river-scene, page 305, the joint work of Bracken and Maxwell, is peculiarly interesting on account of the wealth of pictorial material crowded into the allotted space, without causing an eminently unpleasant effect. But the overhanging branch is altogether overpowering by its unnecessarily black tone. A restraining medium placed on the back of the negative would lighten this feature in the resulting print with beneficial result. Data: August, 9.30 A.M.; good light; 1 A Ansco camera (2½ x 4¼); 4 7/8-inch lens; stop, F/22; 1/10 second; film; pyro; enlarged print on P. M. C. Bromide No. 5.

The little boy on his Kiddie-Kar, page 306, is obviously sitting for his portrait. There is no serious fault here, except that a little more space at the left could have yielded a better placement for the subject. The expression is probably not satisfactory, which is to be regretted where all else is so good. Data: July 6, 1920; bright sun, at noon, almost overhead; 5 x 7 R. O. C. Franklin view-camera; Voigtlander Collinear lens (F/6.8); stop, F/7.7; Cramer Crown 3¼ x 4¼, in kit; pyro, in tray; 1/60 second; F. & P. roller-blind shutter; enlarged on Eastman Bromide.



Our Contributing Critics

F. H. RODGERS has kindly offered a typical winter-scene in Canada for criticism *ad libitum*. He admits that it is a mere record of an animated scene. Data: February, 4 P.M.; bright light; 3¼ x 4¼ Speed Graphic; 5½-inch B & L Zeiss-Tessar 1c; stop, F/4.5; 1/70 second; Premo Film-Pack; tank; Premo Tank Powders; Eastman Bromide, Grade C.

Start Your Pictures Early!

PICTURES that are intended for these competitions, in order to receive consideration by the PHOTO-ERA Jury, must be in the hands of the Publisher on the closing day of the competition, according to the dates which are announced monthly. Allowance should be made for delay in the mails and the pictures started early on their journey.

That Return-Postage!

IN view of the habit, characteristic of some correspondents, of sending a request for information, to answer which often entails much time and trouble, and neglecting to enclose return-postage, we note in one of our foreign exchanges the following notice, printed in large bold type:

"All enquiries sent to this magazine, or to its editorial department, must positively be accompanied by return-postage to be ensured of a reply."



ON THE GROUNDGLASS

WILFRED A. FRENCH



How is this for a Camera-Feat?

MOTORING, last October, through Deerfield—famed for the Bloody Brook Massacre, in 1683, and its fertile valley—I noticed my friend Thaxter, of Boston, making a snapshot of the old, historic Frary House. I stopped my car, got out, taking my 5 x 7 Kodak with me, surveyed the old landmark, in the shadow of a big elm, at 3 p.m., and made an exposure of 1/50 second, at F/12, N. C. Eastman film. I had scarcely squeezed the bulb when I realised that 1/25 second would have been better; so, while the camera was directed towards the object, I gave an additional exposure of 1/50 second, and wound up the film.

When I developed the film, a week later, I found—as I had hoped—that the *two pictures registered exactly!*

A Dark Slide

My brother, the "Walrus," in his inimitable and refreshing causerie, which helps to enliven the pages of our English contemporary, tells of his experiences on a recent holiday. He was vigorously meditating—a habit he has—and at the same time trying to expose a plate. During this mental exertion he was standing with his equipment on the giddy edge of a precipice, lost his balance and nearly fell over into the dark abyss. As it was, he had a dark slide! Indeed he devoted several paragraphs to the dark slide; but, fortunately for him and his numerous faithful readers, the affair had no serious consequences. I suppose, however, that during the rest of his active life the "Walrus" will continue to talk about dark slides.

"How's Your Liver?"

THIS popular query will soon be answered in a definite form: for French science has discovered a process of ascertaining the physical condition of that much-distressed human organ. According to reports sent to this country, the latest step toward solving some of the internal conditions of the human body was made in Paris, recently, through the successful presentation, by means of the X-ray, of the liver. Hitherto, the affected condition of the liver has baffled scientists, because that organism is not opaque to electric rays. By injecting air into the intestines which surround the liver, it is found that this seat of many ailments can be radiographed (X-rayed) with remarkable distinctness, and permit the most precise examination and diagnosis of its condition.

Extracting a Pen from the Penholder

WHEN calling at a local photo-stock house, recently, I found the manager writing a letter. He stopped suddenly, muttering something under his breath—his pen had suddenly ceased to function. He held the penpoint between a folded piece of paper and tried to extract it from the penholder, but without success. His stenographer—bless her soul!—offered to help; so she held on to the penpoint and the manager firmly clasped the penholder. A grand effort of the two, and—the pen stuck fast!

He now sent the young woman out for a pair of pliers, for he was bound to show his mastery of the situation. When she had left the office, I suggested that he try a simple plan that I had picked up abroad. He assented, asking that his stenographer be a witness to the demonstration. As the two looked on, I opened a drawer to his writing-desk, about an inch, held the penpoint firmly on the edge of the drawer, shut the drawer and withdrew the penholder, leaving the useless pen inside. I have since learned that I have been cited to receive the *médaille honoraire*.

The Editorial "We"

SOME people are unreasonably inquisitive and curious, especially about matters that do not concern them in the least. For example, there is the correspondent who makes the startling revelation that he is a "constant reader of our valuable and influential paper," and would like to be informed why it is that an editor or newspaper writer, when speaking of himself in his writings, invariably uses the plural pronoun "we" instead of the singular "I."

There are several reasons. Self-preservation is the first law of nature. It begins at home, like old Mother Charity. There is some human nature about an editor, public opinion to the contrary notwithstanding. An editor thinks too much of his "I's" to wear them in mourning, and therefore, when speaking of some slab-sided six-footer as a miserable, red-nosed, pusillanimous, wife-beating snoozer, he considers it the better part of valor to drop in an occasional "we." This creates in the mind of the six-footer the impression that the editorial force consists of a standing army, armed with deadly "we"-apons.

Furthermore, in cases where the victim comes around to the office to kill the writer of any particular item, it is so pleasant to have the guilty man's identity buried in the obscurity of the plural "we." The editor-in-chief, the news editor, the sub-editor, the commercial editor, the sporting editor, the reporters, compositors, proof-readers, revisers, stereotypers, electrotypers, bookkeepers, bookbinders, jobbers, devil, and all the delivery boys are thus placed on a common footing by the little pronoun "we," and when the enraged person looks about him and finds how many homes he would make desolate, how many wives he would make widows, and how many children orphans by killing off all included in the little "we" at one fell swoop, he sickens of the sanguinary undertaking, turns sadly away, condemns the paper, prophesies that it is being run into the ground, and declares that he will henceforth use his influence to squelch the sheet.

Harrington Photo-Journal.

The Subtlety of Production

"I HEAR the concern is very prosperous."
 "They are."
 "What are they selling?"
 "Stock."
 "What are they making?"
 "Money."



ANSWERS TO QUERIES



F. W. H.—There are some F/4.5 lenses which are convertible; however, this does not mean that they retain this speed; take the Goerz Dogmar Lens as an example; this lens works at a maximum aperture of F/4.5. When one of the combinations is removed, it becomes necessary to stop down to about F/32 to obtain definition equal to the definition obtained with the complete lens. From this, you may see that the speed of a lens is greatly reduced, and that it is not suitable for speed-photography, when the single combinations are used. However, for landscape-photography, the lens does admirable work.

R. W. Y.—The expressions "quarter plate" and "half plate" refer to the size of plates, paper and mounts. These terms are virtually obsolete in the United States, but they are still used extensively in England and the English Colonies. They are based on the assumption that a whole plate is $6\frac{1}{2} \times 8\frac{1}{2}$ inches; half this plate is considered to be $4\frac{1}{2} \times 6\frac{1}{2}$ or $4\frac{1}{4} \times 5\frac{1}{2}$ in the United States, but in England the half plate is understood to be $4\frac{3}{4} \times 6\frac{1}{2}$ inches; a quarter of the whole plate is $3\frac{1}{4} \times 4\frac{1}{4}$ inches and is a standard size throughout the world. It is well for the reader of English photographic literature to keep "quarter plate" and "half plate" clearly in mind to avoid confusion when corresponding with English firms. The whole plate used to be still further divided into sixth and even ninth plate, but these terms have been superseded by the more accurate modern method of designating the size by actual dimensions.

F. P. V.—In using a "fast" plate greater care must be taken not to fog the plate by too much exposure or by careless development. We would not advise beginners to use "fast" plates; but this statement does not alter the fact that advanced amateurs and professional photographers use "fast" plates successfully and obtain all the detail and density that may be required. As soon as the beginner has mastered the use of a good plate of moderate speed, he is in a position to experiment with "fast" plates—but not before.

S. B. C.—An F/6.5 lens works at F/6.5 no matter what the size of plate may be with which it is to be used. The focal length of $9\frac{1}{2}$ inches is suited to cover a $6\frac{1}{2} \times 8\frac{1}{2}$ plate and if your $3\frac{1}{4} \times 5\frac{1}{2}$ camera has sufficient bellows extension, the same lens may be used on the smaller camera.

H. C. W.—The keeping of pyro-soda developer depends in great measure upon the manner in which it is prepared. Some workers report that they have been able to keep this developer for over one year without perceptible deterioration. Its keeping-quality is influenced by the degree to which the container is filled or partly empty and by the frequency with which the bottle is opened. It will keep almost indefinitely if the developer is made with boiled water and the container filled to the very top and then not opened. If the developer should be made with water that contains a good deal of dissolved air and if it is kept in a container only a quarter full which is opened daily, then signs of deterioration will become apparent within a very few days. However, even under such conditions, the developer should be usable for months.

H. J. T.—Pyro-metol developer is very likely to give strong negatives because of the amount of stain that occurs in the image. This developer is not so well suited to portraits on this account. We think that you will do much better to use the ordinary pyro-soda developer that is recommended by the makers of the dryplates you are using.

O. S. M.—If you can do without alum, chrome alum or the like, in the fixing-bath, it is better to do so, because hypo fixes better when unmixed with anything. However, if you are troubled with blistering, by all means use a hardening fixing formula, which is usually an effective preventive of blisters.

B. H. J.—A good formula for toning a print with Schlippe's salt is the following:—

Potassium ferrieyanide	180 grs.
Potassium bromide	60 grs.
Water	20 ozs.

The bleaching is fairly rapid and is followed by a short washing in running water after which the print is immersed in

Schlippe's salt	1 oz.
Water	20 ozs.

This last causes the print to turn to a yellowish-red when it is placed directly into a 5 per cent solution of ammonia to soak for a few moments. Again washing the print in running water, it is placed in the final toning-bath, made up as follows:

Copper chloride, 10 per cent solution . . .	1 oz.
Hydrochloric acid, 10 per cent solution . .	1 oz.
Water	20 ozs.

A half-hour immersion results in a handsome sepia or rich brown tone. A final washing and careful drying complete the process.

H. W. B.—With regard to the best lens that there is to be obtained, we are sorry that there is really no best lens. By that we mean that there is no one lens that will do all kinds of photographic work better than any other lens. In other words, there are many good lenses. Each one is intended for a specific purpose. For example, if you wish to make speed-pictures, you would purchase a Bausch & Lomb Tessar, Carl Zeiss-Tessar, Goerz Celor or Goerz Dogmar convertible, Wollensak Velostigmat, Kodak Anastigmat or other standard lens. If you were not interested in speed-pictures you would probably buy one of the above makes, but in a speed of F/6.3 or F/6.8. Then again, if you are interested in wide-angle work, you might purchase the wide-angle lenses made by these concerns. It all depends on the work you wish to do. If you will write us again and tell us what you wish to do, we shall be glad to advise you.

H. L.—To remove permanganate stains use an oxalic-acid solution which removes the stains quickly and effectively. Ten grains of oxalic acid to an ounce of water will be strong enough. This solution is very poisonous and should be handled carefully. After immersion in the oxalic-acid solution until the marks have disappeared, the negative should be washed.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



George Eastman in Japan

RECENTLY, a number of representative American financiers, bankers and business-men—in the capacity of an unofficial trade-mission—visited Japan. A distinguished member of the party was Mr. George Eastman. It is of interest to note that every effort was made by the Japanese dealers and photographers to make every moment of Mr. Eastman's stay a pleasure. Two brilliant banquets were given in his honor—one by Messrs. Asanuma of Tokio and the other by Messrs. Kuwada of Osaka. At both banquets, the leading dealers were present and Mr. Eastman was enabled to meet them and to obtain first-hand information with regard to the great success of American photographic goods in Japan. As a result of the warmth of Japanese hospitality and the unmistakable opportunities for closer trade-relations, Mr. Eastman hopes sincerely that nothing will disturb the friendly feeling now existing toward America.

A Compliment to American and Canadian Photographers

WE take pleasure to quote the following from a circular letter sent to pictorial contributors in the United States and Canada by the secretary of the Royal Photographic Society of Great Britain. "I am happy to say that we have received from the United States and Canada a collection of pictorial photographs of such outstanding interest that the task of discrimination became one of great difficulty. Those selected by the judges have been placed in the exhibition; but the Council of the Society feel that it would be most unfortunate if the collection generally could not be viewed by the English public, and it is proposed that the bulk of the American and Canadian pictures,—including those shown at the Annual Exhibition,—should form one of our house-exhibitions and be open to the public during the last part of January and the beginning of February 1921."

Yours faithfully

J. MCINTOSH
Secretary.

Contradictory Dates in Daguerreotype-History

HE who loves his history of photography will always remember that the first daguerreotype-portrait was made in America, by Professor J. W. Draper, of New York, on March 31, 1840, although some writers have recorded this event as having occurred during the summer of 1839. He reads with interest, and not without a feeling of sympathy, that the subject (Professor Draper's sister) sat with dazzlingly whitened face for thirty minutes in the brilliant sun. A recent issue of the *British Journal* publishes the result of researches into the early history of Daguerreotypy in the United States, showing that, while Professor J. W. Draper and Professor S. F. B. Morse were making daguerreotypes of inanimate and living subjects, in 1839 and 1840, Robert Cornelius & Dr. Paul B. Goddard and Joseph Saxton were busy in Philadelphia, producing successful pictures of still-life and of living persons, by the Da-

guerre-process. Indeed, the Philadelphia experimenters are said to have preceded their New York rivals by four months in the production of human portraits.

A résumé of the principal events associated with America's early activity in the science of photography is given as follows:

"Aug. 19, 1839.—Daguerre-process disclosed.
Sept. 25, 1839.—Letter giving brief details published in 'United States Gazette.'

Oct. 14, 1839.—Seger takes details to New York (from Philadelphia?).

Oct. 16, 1839.—Still-life pictures made by Saxton, of Philadelphia.

Nov., 1839.—Experimental portraits made by Cornelius, in his backyard.

Nov. (?), 1839.—Still-life pictures made by Morse in New York.

Dec., 1839.—Daguerreotype improved (quickened) by Goddard, making portraits possible.

Jan. 3, 1840.—First French Daguerreotype reached Philadelphia.

Feb. 16, 1840.—Cornelius opened studio in Philadelphia, and made first 'professional' portraits, at a charge of five dollars each.

March 6, 1840.—Above exhibited at the Philo-sophical Society.

March 31, 1840.—Draper's portrait."

Associated Camera Clubs of America

EDITOR OF THE PHOTO-ERA MAGAZINE:

The officers of the Associated Camera Clubs of America, 878-880 Broad Street, Newark, N.J., have been duly elected to serve in their respective capacity for the term ending September 30, 1921: Julius F. Graether, pres't.; Todd Hazen, vice-pres't.; Louis F. Bucher, sec'y.; Henry C. Brewster, treas.; Board of Directors: W. C. Mackintosh, G. H. Rowe, J. J. Ryan, W. T. Starr, J. C. Stick, M. R. Witt.

The A. C. C. of A. now comprises twenty-five clubs as printed below.

Two Interchanges, one for prints and another for lantern-slides, are being routed for 1920-1921 and the enthusiasm behind the organization is beyond my fondest hopes. It is our hope and ambition to be instrumental in forming many more clubs throughout the U.S.A., but you will hear more of that later.

LOUIS F. BUCHER, *Secretary.*

Associated Camera Club Members to Date, November 19, 1919

BALTIMORE, Photographic Society of, 105 West Franklin St.

BOSTON, Y. M. C. U. Camera Club, 48 Boylston St.
CHICAGO, Camera Club, 31 West Lake St.

CLEVELAND, Photographic Society of, 412 West Superior.

DETROIT, Overscas Camera Club, 543 Cass Ave.
GRAND RAPIDS, Camera Club, 2 Central Place, N.E.

HANOVER, N.H., Dartmouth Camera Club, 7-8 Robinson Hall.

HOBOKEN, N.J., Elysian Camera Club, 307 Washington St.

INDIANAPOLIS, Camera Club, 406 Rauh Bldg.

KANSAS CITY, Camera Club, Suite 501 Bryant Bldg.

LOS ANGELES, Southern California Camera Club, 522 Wilcox Bldg.

NEWARK, Camera Club, 878-880 Broad St.

NEW BRITAIN, CONN., Camera Club, 173 Main St.

NEW HAVEN, CONN., Camera Club, 739 Chapel St., Room 28.

ORANGE, N. J., Camera Club, 1 South Clinton St., East Orange, N.J.

PHILADELPHIA, Columbia Photographic Society, 2526 North Broad St.

PHILADELPHIA, Photographic Society of, 1615-1617 Sanson St.

Pictorial Photographers of America, N.Y.C., 119 East 19th St.

PORTLAND, ME., Camera Club, Cor. Spring and High Sts.

PORTLAND, ORE., Oregon Camera Club, Elks' Bldg.

READING, PA., Camera Club, 610 Court St.

SAN FRANCISCO, California Camera Club, 833 Market St.

ST. LOUIS, Camera Club, 2838 Shenandoah Ave.

WATERBURY, CONN., Camera Club, 48 Edson Ave.

YONKERS, N.Y., Camera Club, Holly Wood Inn Bldg.

SPECIAL NOTE.—If any reader have any correspondence with clubs in Pittsburgh, New York City, Rochester, Buffalo, Elmira, Wilkes-Barre, Detroit or other cities, will he please urge upon them the advantage of membership in the A. C. C. of A.

Photographing President Millerand

ACCORDING to a report, fifteen Paris photographers went to the Palace of the Elysée, recently, to photograph M. Millerand, President of the French Republic, in answer to a competition that had been organised; the winning photograph was declared to be the one to be used officially.

Exhibit of B. F. Langland

READERS of PHOTO-ERA MAGAZINE who live in Chicago and vicinity, and, remembering the beautiful pictorial work that has appeared in its pages, during the past few years, of B. F. Langland, of Milwaukee, had an opportunity to admire a collection of delightful gum-prints by that talented worker, at the studio of the Chicago Camera Club, November 10 to 25, 1920.

An Ideal Holiday-Book for Children

FEW story-books written for children and lovers of children, and illustrated with photographs from life, have enjoyed such popular favor as "Topsy and Turvy," with its interesting episodes from the daily lives of "Topsy," the cat, and "Turvy," the dog. The stories are by Carine Cadby, and the (40) illustrations by Will Cadby. Sent, postpaid, for \$1.60, by PHOTO-ERA MAGAZINE.

Photographic Larceny

"BEEN burglarised, eh? How about that camera you had set for just such an occasion?"

"Hang it all, instead of the camera taking the burglar, the burglar took the camera."—*Exchange*.

Sending Photographs by Telegraph

THE photographic sensation of the year seems to be the sending of photographs by telegraph by means of the teleostereograph, an invention of Edward Belin, an eminent French engineer, and first demonstrated November 14, 1920, when four photographs were wired between New York and St. Louis. Each of the four pictures went the 1,000-mile route in about eight minutes. The tests were made between the office of the *World*, of New York, and the editorial rooms of the *Post-Dispatch*, of St. Louis, and were conducted by Mr. Belin, who came to New York expressly for this purpose. According to Austin C. Lescaboura, editor of the *Scientific American*, and author of the well-known book, "Behind the Motion-Picture Screen," who described the teleostereograph in a recent issue of his paper, the transmission is simply a matter of preparing a bas-relief of the photograph, and then tracing that bas-relief with a stylus connected to a telephone-transmitter. The latter varies the current flowing over the wire in accordance with the relative height of any point of the bas-relief record at any given moment. At the receiving-end, this current variation is translated into various gradations of light.

The first step, then, is to prepare the transmitting-record or plate. A copper-cylinder forms the base of the record (which, incidentally, is of the size and appearance of the old-fashioned phonograph-records), and its surface is coated with a five per cent shellac-solution. Meanwhile, a carbon-print is made in conventional photographic manner from the photographic negative to be transmitted, after which the print is wrapped face to face with the shellacked copper-cylinder.

The cylinder with the print is then placed in hot water, with the result that the gelatine of the print adheres to the cylinder in accordance with its own degree of blackness, while the exposed gelatine is washed away with the paper. In this manner, a coating of uneven thickness is formed on the cylinder, or a photograph in bas-relief.

Among the photographs, transmitted on this occasion, were a view of the Yale-Princeton football-game (November 13); an airplane-picture of the East River skyline, showing Brooklyn Bridge, and a portrait of an Indian Chief. The last-named was published on the front page of *The World* as "a direct reproduction of the photograph sent by the *Post-Dispatch* from St. Louis to the *World* Building in New York, Sunday afternoon, and is reproduced *untouched* and the exact size received. The time of transmission was eight minutes."

Making allowance for the rather poor quality of the paper on which this particular issue of the *New York World* was printed, the reproduced picture of the Indian chief was recognisable. As the proprietor of the paper is said to have remarked, "the teleostereograph hasn't quite reached the practical stage yet."

Of course, faithful readers of this magazine will appreciate the fact that M. Belin's invention is really an improvement over the telautograph, invented and demonstrated by the distinguished physicist, Dr. Arthur Korn, of Munich, with several successive models in 1902, 1904 and 1908—a circumstance which the scribes of the *New York World* have overlooked. Nevertheless, when M. Belin's method shall have been perfected, better and even greater things will be achieved by its means. It will become an invaluable asset in criminology, in war and the sciences.

Our compliments to the French inventor, and to the enterprising newspaper-publisher of New York!



BOATS

ALTON H. BLACKINTON

The Gum-Process Simplified

Editor of Photo-Era: I am enclosing a small gum-print that I made recently, thinking that it might be of interest to your many readers, who may be of the opinion that this is a difficult process, and suitable only for large pictures. It was made very simply as follows:

Fifteen drops of saturated solution of bichromate of potash were added to one-half spoonful of LePage's glue, and a small piece of India ink (spotting color) was then ground into the mixture. Ordinary water-color drawing-paper was coated thinly with this preparation, and dried by means of an electric fan, in contact with daylight. The paper was printed for one minute, in front of an arc-light (sunlight would serve the purpose equally well), washed for ten minutes, then coated again, and once more printed and washed. In connection with the third coating, I added a little opaque, to impart a warm, reddish tone, and printed the last coating only forty-five seconds. The entire process consumed less than one hour; and several prints could have been made at the same time.

I am convinced that small gum-prints can be made as readily as large ones, and at the same time retain their richness and quality. The negative was made at Gloucester, with exposure of 1/25 second; aperture F/11; on L. Ortho Seed-plate; developed with pyro; July 6, 1920.

ALTON H. BLACKINTON,

Boston Herald, Art-Department.

Back Volumes of Photo-Era Magazine

THE call for back volumes of PHOTO-ERA MAGAZINE has never been so great as at present. The educational as well as the entertaining features of the magazine are apparent to camerists who desire to improve their photographic work technically and artistically.

We have the following complete volumes in stock, *ready for binding*—1904, 1907, 1908, 1909, 1910, 1912, 1913, 1914, 1915, 1916, and 1917. The price is 15 or 20 cents per copy according to the year—1904 to March 1917, 15 cents; March 1917 to July 1920, 20 cents. Postage 3 cents additional per copy. This is an excellent opportunity to obtain a complete file of PHOTO-ERA MAGAZINE at the old price. Orders will be filled as received and subject to prior sale.

The Uses of "Grippit"

THE EDITOR OF PHOTO-ERA MAGAZINE:

We have read with much interest your remarks in the November issue of PHOTO-ERA MAGAZINE on the subject of "Grippit." In particular, we are interested in your recommendation of "Grippit" for mending broken tripods, trays and bottles.

We feel, however, in spite of favorable results which you may have obtained on this class of work, that we should call to the attention of your readers the fact, that Grippit is not a cement and is not designed for purposes which necessitate structural strength.

Grippit has such innumerable uses and such extraordinary properties, that it is difficult to persuade its friends that it is not ideal for *every* possible sticking-problem. On the other hand, those who are not familiar with Grippit, find it difficult to believe that an absolutely clean and non-wrinkling adhesive has at last been discovered. We wish, therefore, to be doubly scrupulous in making sure that no claims are made which we cannot endorse without qualification.

DEWEY & ALMY CHEMICAL CO.

CUSTOMER—"Are your portraits good likenesses?"

Photographer—"Well, yes, of course—if the sitter insists."—*Transcript.*



LONDON LETTER

CARINE AND WILL CADBY



ALTHOUGH PHOTO-ERA has probably had a special report of the London Salon exhibition which must have been published before these notes can appear, it is still our duty to record our impressions of the show.

There were three hundred and seventy-seven pictures shown, contributed by one hundred and eighty-seven exhibitors, one hundred and four of whom hail from Great Britain, thirty-three from the United States, the remainder coming from the Colonies, India, Spain, Italy, Egypt, Holland, Belgium, Sweden and Japan; so it is a fairly representative show. There are, as usual, too many photographs hung, and the screens down the middle of the gallery might well have been dispensed with.

The days are passed when we went eagerly to the early international exhibitions, expecting, and often finding, innovations and startling artistic advances. The technique of most of the exhibitors of the present day is so good, that one seldom sees bad work from the purely photographic point of view. In the early days, we often came across bad photography that nevertheless carried with it some pictorial suggestion that had not before been expressed by the camera.

The present show is good, but in the very nature of things not very startling. The only novelty is a print by G. E. H. Rawlins, called "Laughing Boy." It was made by a new oil-process. As shown, it has no half-tones, simply black and white, somewhat like a stencil. It certainly is striking in appearance, and if it can be carried further, so as to give at least a short scale of gradation, it would prove a useful and attractive process for certain subjects. Being so strong in contrast, it "carries" well and is seen best at some distance. Bertram Park has a fine portrait-group of a mother and two children, which is altogether excellent. In his pictures of the Spanish Royal family and Mr. Ward Muir, all hung together, he is not so successful. The Spanish Royalties have been over-retouched in the ordinary professional manner, probably a necessity where royalties are concerned, but regrettable in the case of so skilful an artist as Mr. Park. In the picture of Mr. Ward Muir, a good and original likeness has been somewhat marred by emphasising with obvious and elaborate hand-work the curious lighting, which makes the forehead of his always popular model appear as a bit of complex armor-plating. It is just possible that this sort of thing may lead to new photographic developments, and anyway, it got the picture a notice in the *Daily Mail*. In "The Promenade, Brooklyn Bridge," by John Paul Edwards, we have a really natural jazz subject, obtained apparently by straight photography, before which the Purist and the Futurist, one would imagine, might sit comfortably down together, and both find some satisfaction, although, probably, neither would be quite satisfied.

For sound and satisfactory advance in pictorial portraiture, no one in our opinion goes further than Mr. H. Lambert, a professional photographer of Bath. If he is giving the people there such superb renderings of their children as he shows in "Jeanne" and "Deirdre" we shall, or ought to have, all London taking the little ones to be photographed in the West Country. They are portraits that cannot become old-fashioned or out of date, because not only has the spirit of the sitters

been caught, but it has materialised in such a way that the results are pictures in the highest sense of the word. Elimination—probably by lighting and possibly by retouching—has been skilfully employed, but it does not show, which is the cardinal necessity in a photograph. Immense experience and judgment are behind it all, and, probably, the uninitiated—attracted by these masterly and, apparently, simple yet subtle studies—will be asking Mr. Lambert, "What camera do you use?"

Leonard Missonne has eight pictures all hung together. They are very charming landscapes, and possess that original yet engraving-like treatment to which he has accustomed us in his work. A certain humor has been shown by the Hanging-Committee in placing an excellent photograph of Mr. F. C. Tilney (the father of photographic criticism) immediately above an extraordinary piece of work (Herbert Lomas as Abraham Lincoln (bas-relief), which, we think, he would not approve. Mr. A. Keighley, one of the elder photographers, has some good landscapes in his usual style, but with more strength than he generally gets. They are hung in the place of honor at the top of the gallery. There are very few nudes, and one of them, entitled "Grief," is a marvelously bent figure that we think should have been called "Athletics."

The Royal Photographic Society's exhibition is held again in its rooms at Russell Square, W.C. It seems almost a pity that it should be open at the same time as the Salon, for many people naturally go from one show to the other, comparing the Royal Pictorial Section with the Salon, to the obvious disadvantage of the former. This is not fair; for the energies of the Royal are divided between three sections, and it cannot be expected that the pictorial group can be as good or representative as the Salon, which is frankly and solely a pictorial show, and, moreover, inherits the prestige of the old Linked Ring exhibitions.

The judges in Section 1 (Pictorial Photography) are Bertram Cox, J. Dudley Johnston, A. Keighley, F. J. Mortimer and Hector Marchison, a strong team, and we can only wish they had more good material to deal with, as much that is hung would have been better rejected, if the reputation of the section is to be maintained. True, quite a number of exhibitors are here who are also represented at the Salon; but in studying much of what they have sent, one cannot escape the thought that it is either what we should call not their best, or they have surmised that a different standard of work is required than at the Salon. A singular coincidence is that portraits of both Mr. Tilney and Mr. Ward Muir are to be seen here as at the Salon, but by different photographers. There is, of course, a considerable quantity of good work, but sandwiched in between indifferent photographs in none too good a light, it is likely to be missed.

In Section II (Color-Transparencies) there is much to interest all photographers. F. T. Hollyer and W. L. F. Wastell form the pictorial selecting-committee and judges. A wonderful exhibit was a soap-bubble, by Mr. N. E. Lubosch, containing a glass-ornament on a metal-pedestal, the whole covered with a glass-shade, and the color showed only in the soap-bubble,

(Continued on next page)

Airplane-Photography

THE practice of photography from the air, begun first with the aid of kites and captive balloons, many years ago, was brought to a remarkable state of development to meet the exigencies of the late European war. Although described fragmentarily with interesting examples of camera-achievements in the daily, the monthly and the photographic press, during the past six years, this important subject has at last formed the subject of a book by no less an authority than Major Herbert E. Ives of the Aviation Section Reserve and formerly Officer in Charge of Experimental Department, Photographic Branch, Air-Service, U. S. A. In this valuable work, issued by J. B. Lippincott Company, of Philadelphia and London, the author—himself an accomplished aerial photographer of wide experience during the World War—covers the subject very thoroughly and emphasises those general scientific principles which apply—no matter what may be the purpose—to making photographs from the air. Although it is assumed that the reader has a practical knowledge of photography, considerable space is devoted to the fundamentals of photography and scientific methods of study, tests and specifications. The reason for this is that aerial photography strains to the utmost the capacity of the photographic process, and it is necessary that the most advanced methods be understood by those who would obtain the best results. There are thirty-three chapters divided into seven general heads:

Introductory; The Airplane-Camera; The Suspension and Installation of Airplane-Cameras; Sensitised Materials and Chemicals; Methods of Developing Plates, Films and Papers; Practical Problems and Data; The Future of Aerial Photography.

The contents cover 421 pages (including a complete index) with over 200 illustrations, mostly of apparatus and its use, and photographs from the air—of battle-fields and aviation-fields, and of the cities of Vienna, Venice, Rheims and Washington, exemplifying the utmost technical skill. The book, published at \$4.00 net, will fill a need expressed frequently to the Editors of PHOTO-ERA MAGAZINE, and will aid materially in the preparation of skilled aerial photographers whose services, even in times of peace, will doubtless be in great demand.



London Letter

(Continued from preceding page)

and not in the glass. There was also a beautiful and true rendering of a Swiss winter-landscape by a Swiss, a difficult subject with color-photography, because of the delicacy of the blues in the snow.

Section III, comprised of scientific and technical photographs, contained many exhibits from the United States, notably the National Geographic Society, Washington, U. S. Geological Survey, and the Mount Wilson Observatory, California. It was in looking at one of the fine exhibits of the moon, by the last-named institution, that we, in our astronomical ignorance, momentarily thought we were observing a belated example of the battle-fields of France. The big and the little shell-holes were all there, and the devastation seemed about as complete as was shown in photographs of the heaviest-shelled portions of the line. But we quickly saw our mistake, and realised that it was a No Man's Land of Nature's making. An interesting

set of insect-photographs, by Miss Booth, of Springfield, Mass., attracted our attention, the male flea of the mouse being a very fine print.

The Library, on the ground-floor, has been darkened, and is devoted to well-lighted examples illustrating the photographic side of Radiography. This exhibit has been awarded a medal, and is by Mr. N. E. Luboshez. Sets of X-ray negatives on Eastman Dupli-tized film show the relation of proper exposure and proper development. They are all experiments, the data of each being given in the catalog. The object is "to accumulate sufficient relative data and facts which would enable one to decide the condition of exposure which could be developed in a definite solution for a specific length of time to give the best average results, and make it possible to arrive at a practical method of automatic development by time." The catalog is, as usual, illustrated by examples from the different sections. Entrance to the exhibition is free.

The Principles of Photo-Engraving

ALMOST every reader of PHOTO-ERA MAGAZINE, admiring the reproduction of a certain picture, must have wished to know something about the process by means of which so good a copy was made. The photo-engraving or halftone-process is clearly described, in general terms, in a little book, written by P. C. Raymer, one of the instructors in the Photo-Engraving Department of the Bissell College of Photo-Engraving at Effingham, Illinois. Every step in halftone-engraving is clearly and accurately described, for the benefit of students of the process. Price of this useful little book is \$1.50 postpaid.

To Our Officers—Passed On

MARGARET E. SANGSTER

They are not dead, not really, they are *living*—
Leading their columns, as they led before,
Leading their comrades up to Heaven's door.
They are not dead, not they!

Why, they are giving
Strength, as they gave it on the battle-line,
Courage to do the hardest task, and fine
Manhood to meet the test . . .

They were our best—
They, and the ones they led into the fight!
They were the ones who challenged terror's night,
They were the men who won, at last, to rest . . .

They are not dead, not really; they are striving,
Just as they did on earth, across the way;
And we must show them that we are reviving
Visions of all they suffered—*yesterday*.
We who are left must keep their spirit glowing,
We who are left must keep their memory clear,
We who are left must feel that they are knowing—
We who are left must feel that they can hear!

Just a Picture

SITTER (dubiously)—"Um-er—the portrait is very nice, but it doesn't look like me in the least."

D'Auber (loftily)—"Look like you? please remember I am an artist, not a photographer."

Boston Transcript.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the law offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents can be obtained by sending twenty-five cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of October, the last issues of which have been disclosed to the public.

A Reflex Camera, patent, number 1,352,449, issued to Varian M. Harris, assignor to Popular Reflex Camera Corporation, both of Chicago, Ill.

James R. Kugler and Earl M. Kugler of Clear Lake, Ia., have invented an Electric Retouching-Pencil for photographic use. The patent-number is 1,352,976. The patent has been assigned to Peter Hauenstein and Charles C. Kasterholz.

Patent, number 1,353,266, on a camera has been issued to Robert H. Pearman of Boston, Mass., assignor to Thos. E. Steere, Providence, R.I.

Process for and Apparatus for Making Photographic Prints, patent, number 1,353,690, has been issued to Charles W. Wilson of York, Pa.

Charles Louis Lambrick, Brooks, Alberta, Canada, has invented a Film-Holder patent, number 1,353,703.

Patent, number 1,353,932, a Photographic-Printing-Frame, has been issued to Carl Joseph Lish, of Louisville, Ky.

George N. Pifer of Cleveland, Ohio, has a Process of Making Lithographic Posters. The patent-number is 1,354,001. The invention has been assigned to the Postgraph Company of Cleveland, Ohio.

The Eastman Kodak has had assigned to it an invention on a Photographic Shutter. The inventor is Ernest E. Underwood of Rochester, N.Y. Patent, number 1,354,526.

Henry W. Arthur of Sioux City, Ia., has received patent, number 1,354,461. The patent is a Camera-Shutter-Controlling Device.

Egildo Pieri of New York has received patent, number 1,354,990, on a Camera-Attachment.

Patent, number 1,352,037, has been issued to Dewey E. Stiles of Los Angeles, Cal. The patent is on a Film-Retouching Holder.

A Combination Camera and Film-Case has been invented by Robert LeRoy Atwell of Atlanta, Ga. Patent, number 1,354,011.

Difficulties with Foreign-Made Plateholders

EDITOR OF PHOTO-ERA MAGAZINE:

Having done considerable photographic work with a well-known make of foreign camera, the writer discovered recently a serious defect in the manufacture of the metal-plateholders.

After operating with my $6\frac{1}{2} \times 9$ cm. camera for some time, he found it difficult to obtain negatives that were free of small hair-lines of various sizes; these would be grouped or isolated. Of course, in the finished negative the same would be perfectly transparent, and with such plates it would be impossible to obtain a perfect enlargement, which is essential with plates of the above size.

At all times the metal holders were carefully dusted

out and all foreign matter removed, but there was no relief from this trouble. One day, when the writer had a few spare moments to think over this difficulty, he made the following observation. On looking into the light-trap at the top, I found a kind of felt was used with very long hair, which was red in color (I have recently inspected a new lot of holders and they still use this same felt); these hairs from passing the thin metal-slide in and out of the trap loosen up in time, and of course fall upon or attach themselves to the unexposed plate, and further will give a transparent spot on the dense part of the negative.

I immediately set about to find a remedy for this difficulty. If you have any such holders, take the metal-slide and pass it back and forth through the light-trap about two dozen times, to loosen up the hair-particles which are not firmly attached. You will be amazed to see the small hair-particles which will come out of the trap and settle on the inside of holder; this should be removed with a small brush. From time to time, take this precaution if you wish to obtain clean negatives.

Another cause of trouble, at times, is the black lacquer with which the holders are covered. Look over the holders carefully, and if you find any small blisters or loose particles flaking off carefully pick these away with a small knife, and clean with brush; it will save you much annoyance.

F. A. HASSE.

A Simple Ray-Filter Holder

EDITOR PHOTO-ERA MAGAZINE:

"A home-made ray-filter holder" in the November number of the PHOTO-ERA MAGAZINE interests me but I fail to see the necessity for so much time and labor being spent on so simple a device.

Here's my method of doing the same thing in twenty minutes.

Take a $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{3}{8}$ inch thick piece of panel-pine wood, that's the stuff free of all knots. Cut a hole into it exactly in the center, the hole to be a very snug fit for lens-hood, lay the three-inch square filter on the wood, over the hole, mark two points at bottom and one at each side, screw in four light screw-eyes and it's all over. The lens-hood pushing through the hole, binds against the filter, holds it squarely against hood and, at the same time, prevents its slipping out if camera is lifted.



G. A. CONRAD.

"My Eye!"

"WHAT are you studying now?" asked Mrs. Johnson, at the breakfast-table.

"We have taken up the subject of molecules," answered her son.

"I hope that you will be very attentive and practice constantly," said the mother. "I tried to get your father to wear one, but he could not keep it in his eye."—*Kansas City Star*.



WITH THE TRADE



Increased Business through Sale of Photo-Era

OCTOBER 13, 1920.

PUBLISHERS OF "PHOTO-ERA,"

367 Boylston St.,
Boston, Mass.

Gentlemen:—It may please you to know that our entire supply of copies of October PHOTO-ERA was sold out before October 6 (two days after receipt) and we are sending you an order to increase our monthly allotment.

We find that the sale of photographic publications, helps to increase the sale of photographic materials, as many customers call each month to buy their favorite publication and are reminded of other materials they need.

Hope the day is not far distant when we can sell five hundred or more copies per month. It is up to the publishers to increase the quality and maintain a high standard, and when this is done, we feel sure the dealer will do his part.

Yours very truly

CHARLES G. WILLOUGHBY, INC.

The Photo-Industrial Situation in England

No one can help sympathising with a people whose industries are unprotected, and who have to compete with foreign-made products of equal merit, but at a lower sales-price. The English are facing such a crisis, according to press-reports. Since the declaration of peace with Germany, her old commercial rival, England has been troubled with the prospect of what she considers unfair competition, and she hoped that the loyalty of her people to home-industries would impede, if not prevent, the sale of imported German goods. But, alas! sentiment cannot compete successfully with material gain and personal satisfaction, and so—according to reports—England is "flooded with German goods." Naturally, these include German-made cameras, lenses, and other photographic material, which, were they of inferior quality, would find no market among the discriminating consumers in England, where similar products are made of a quality at least as high as those made in Germany.

Foreseeing this dilemma, the *Photographic Dealer*, published in London, has made a gallant fight against the purchase of German cameras and photographic supplies. It has urged and implored the home-dealers not to carry them, and not to allow them to enter their shops. "On no account, must German goods be allowed to supplant the product of British factories." The English publication points with pride to the fact that, for six years (of the late war), the English photographic trade has done without German cameras, lenses, papers and sundries, and that the English dealers can hardly complain that they have suffered in consequence. The manufacturers were able to supply the necessarily decreased demands, at the same time maintaining the well-known high English standard of workmanship and efficiency. The *Photographic Dealer* does not hesitate to admit the commercial sagacity of the photographic dealers in Germany, who appre-

ciate the fact that their prosperity is due to the financial and productive strength of native manufacturers.

But the main point at issue is the deplorable fact that the English photographic-press, notably the *Photographic Dealer*, has failed in its efforts to arouse popular sentiment against German photographic goods, or to prevent their flooding the English market. The English press appealed in vain to public sympathy and justice. This was to be expected from a country that is committed to free trade—to a policy that does not protect home-industries by a tariff. In England, where superior excellence is the outstanding feature of all its manufactures, high quality is sure to be maintained, in its flourishing industries, despite any protective tariff that might be adopted. Moreover, a protective tariff, however high, would not suffice to keep out German manufactured products. Whether or not, free trade will continue as a cherished English ideal, or become a positive commercial necessity, is a question that can be determined only by future conditions.

W. A. F.

Original "Agfa" Products

THE many consumers of "Agfa" products, during many years past, although interrupted by the late war, will be glad to know that they are again available in this country. The importer and distributor, for wholesale- and retail-orders, is the Sagamore Chemical Co., Inc., 120-122 West 31st St., New York City, of which Mr. George L. Barrows is the president and manager, well-known to the wholesale- and retail-trade for many years.

It will be seen by the Sagamore Chemical Company's advertisement, in this issue, that the "Agfa" products include such standard developing-agents as Glycin, Eikonogen, Ortol, Amidol and Rodinal; also the standard flashpowder "Blitzlicht" which is brilliant, safe and the only flashlight-powder admitted in the mails. It produces pictures of the highest quality. Any one doing flashlight-work, and using the Pocket "Agfa" Flashlamp, will naturally be in need of the Sparking-Metal, which is also supplied by the Sagamore Chemical Company. Another important specialty are Aniline Colors (in all standard shades) for coloring lantern-slides and photographic prints.

Color-Sensitive Negative-Paper

ONE of the many results of the scarcity of raw materials in Germany, and the general desire for cheaper negative-material, is a photographic novelty in the form of color-sensitive negative-paper. This new product may enjoy a certain degree of popularity, provided that it correspond to the requirements of the critical user—high sensitiveness and freedom of grain—although, of course, glass dryplates of a corresponding character will always be preferred.



It is well for a photo-dealer who has a clerk who is a better business man than himself to recognise, although he may not acknowledge, the fact.—*The Spatula*.

Work of Reference and Art-Album



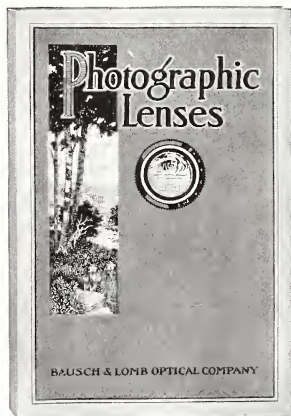
in one volume. That is what the new catalog of

Bausch & Lomb Anastigmat Lenses

amounts to. Just from the press, with new illustrations throughout, it will excite the admiration of all lovers of artistic printing and book-making. It is also significant as the first complete catalog of this line which we have been able to publish since before the war.

The publication contains a fund of technical and practical information regarding photographic terms, optical properties of lenses, advice as to the most suitable lens-equipment for the various types of photography, and a liberal assortment of specimen photographic reproductions.

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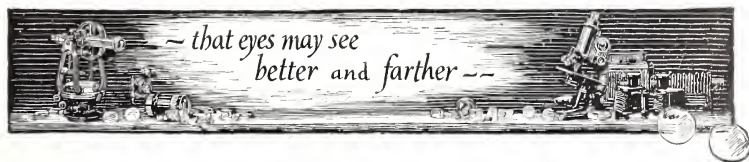
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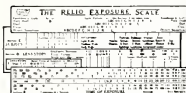


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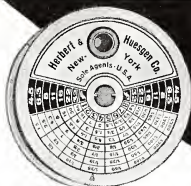
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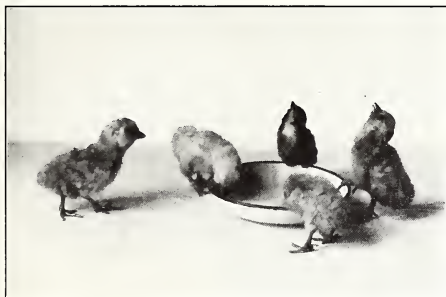
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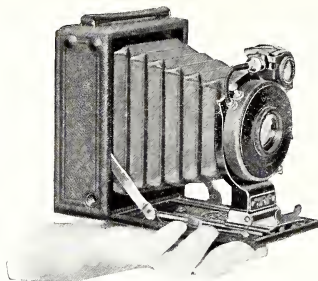
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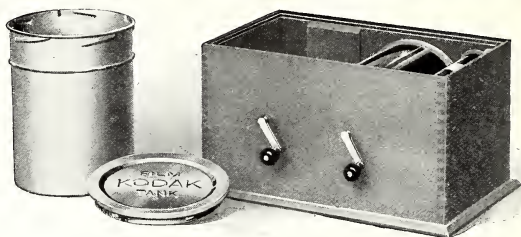
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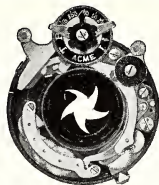
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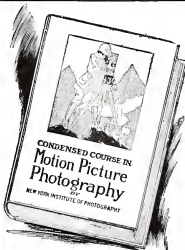


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To Contributors: Contributions relating to photography are solicited and will receive careful consideration. Preference is given to MS. that is typewritten, and to authors who are practical amateur or professional photographers.

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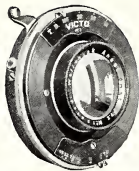
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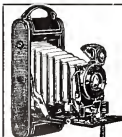
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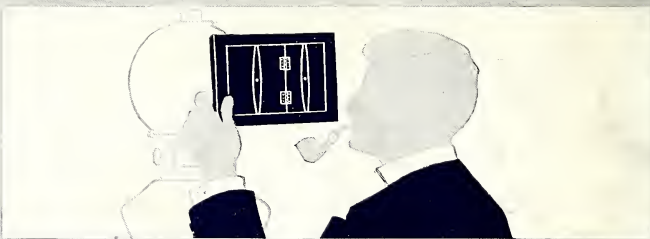
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